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Fossil Mammals of Africa

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OF
AFRICA
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and
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FOSSIL MAMMALS OF AFRICA

- No. 1. The Miocene Hominoidea of East Africa. W. E. Le Gros Clark and L. S. B. Leakey. 117 pp., 9 pls. 1951. Price £1 5s.
- No. 2. The Pleistocene Fauna of Two Blue Nile Sites. A. J. Arkell, D. M. A. Bate, L. H. Wells and A. D. Lacaille. 50 pp. 1951. Price 15s.
- No. 3. Associated Jaws and Limb Bones of *Limnopithecus macinnesi*. W. E. Le Gros Clark and D. P. Thomas. 27 pp., 6 pls. 1951. Price 15s.
- No. 4. Miocene Anthracotheriidae from East Africa. D. G. MacInnes. 24 pp., 4 pls. 1951. Price 12s. 6d.
- No. 5. The Miocene Lemuroids of East Africa. W. E. Le Gros Clark and D. P. Thomas. 20 pp., 3 pls. 1952. Price 12s. 6d.
- No. 6. The Miocene and Pleistocene Lagomorpha of East Africa. D. G. MacInnes. 30 pp., 1 pl. 1953. Price 10s.
- No. 7. The Miocene Hyracoids of East Africa. T. Whitworth. 58 pp., 7 pls. 1954. Price £1 5s.



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INTRODUCTION

This bibliography, an expansion of one begun for our own use, bears the impress of its origin. It is designed for zoologists interested in the comparative anatomy, distribution, and history of the mammalian faunas of Africa, rather than for geologists and archaeologists. Nevertheless, these may derive assistance from the faunal lists, the geological horizons, and the occasional note of the type of artefact associated with the fossils. Taxonomers, who have to spend so much of their time in the study of "la stérile nomenclature des objets", to borrow a phrase from Lamarck, will find here and there notes that we hope may help them; neither have librarians and other bibliographers been forgotten as we worked.

About nine-tenths of the items listed are contained in the libraries of the British Museum (Natural History): the majority are also available in other institutions that are outlier libraries of the National Central Library. Certain publications do not appear to be in any library in the British Isles, and a few are not included in the "World List of Scientific Periodicals". Titles of papers published in these periodicals, given on the authority of others, are either accompanied by a reference to the source whence they were taken, e.g., *teste* ROMER, 1928, or by an abstract of a summary in some other periodical, to which reference is also made.

Conventions have been kept to a minimum and are intended to be self-evident. Short explanations follow, in case we have missed our aim.

Authors' names are cross-indexed where necessary, but the title appears under the first name, i.e., COOKE & CLARK, 1939, is indexed after COOKE, with a cross-reference under CLARK.

Anonymous Works. Unsigned papers are grouped under the general heading ANONYMOUS.

Dates are the year of publication; if this differs from the year to which the volume relates, the latter is added in brackets, e.g., 1901 (1900).

Contracted titles of periodicals follow the "World List" in the main, but minor modifications have been made if they render the contraction easier to interpret.

The town following the title is always the place of publication, thus, "C.R. Ass. franç. Av. Sci., Paris," irrespective of the town where the Association met; also "Ann. Transv. Mus., Pretoria," where the *Annals* are published, despite the imprint "Cambridge", where they are printed.

Volume numbers follow the practice, sometimes wildly erratic, of the different periodicals; if there is none, the year to which the volume relates is used instead, e.g., "C.R. Soc. géol. Fr., Paris, 1938."

Abstracts of papers rarely repeat information given in the title. As a rule they are confined to simple lists of species, together with the locality and geological horizon, but sometimes we have attempted to summarise an author's opinion, and occasionally we have given a direct quotation. Our own opinions and comments are always enclosed in square brackets.

Certain authors are still unaware that capsian, mousterian, lower palaeolithic, and similar terms are not equivalent to subdivisions of the geological time-scale; in these instances we have used a phrase such as "associated with neolithic culture".

When it has been necessary to abstract a review or summary instead of the paper itself, we have enclosed the abstract in [] and given a reference to our source of information. If we have found summaries of papers that we have seen in the original, we have placed a reference to the summary after our abstract, thus, [*Anthropologie*, 31: 369].

Acknowledgements. We are greatly indebted to many friends and colleagues who have lessened our task in various ways, particularly to the Revd. Fr. Teilhard de Chardin, Miss B. M. Skramovsky and Mr. A. C. Townsend, who have given us so freely of their knowledge and experience. Lastly, if somewhat unconventionally, we acknowledge our indebtedness to all those authors who checked their references before going to press, and by their accuracy saved us much trouble.

A. TINDELL HOPWOOD
JUNE HOLLYFIELD

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Eotherium aegyptiacum Owen, *Eosiren libyca* Andr., *Protosiren fraasi* gen. et sp. nov. [on p. 214 only, where **nom. nud.** See 1906]
- 1905a. Les Odontocètes du Boldérien (Miocène supérieur) d'Anvers. *Mém. Mus. Hist. nat. Belg.*, Bruxelles, **3**, 2: 1-155, 27 figs.
Dentition of *Protocetus atavus* Fraas, *Eocetus* Fraas, and *Zeuglodon osiris* Dames.
- 1905b. Die phylogenetische Entwicklung des Cetaceengebisses und die systematische Stellung der Physeteriden. *Verh. dtsh. zool. Ges.*, Leipzig, **15**: 84-96.
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1907. Über die Bedeutung der marinen Fossilfunde im Alttertiär Ägyptens für die Geschichte der Säugetiere. *Verh. zool.-bot. Ges. Wien*, **57**: 78-80.
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Correlation Table. Figs. of *Protocetus atavus*, *Zeuglodon isis*, *Z. osiris*, *Arsinoitherium zitteli*, *Moeritherium lyonsi*, *Barytherium grave*, *Palaeomastodon beadnelli*, *P. wintoni*, *Eotherium aegyptiacum*, *Parapithecus fraasi*, *Libypithecus markgrafi*, *Propliopithecus haeckeli* copied from various authors.
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Australopithecus a young gorilla.
- 1928b. See WEBER, 1927-1928.
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Detailed comparisons and discussion based on a study of casts.
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1900. Fossil Mammalia from Egypt. *Geol. Mag.*, London, (4) **7**: 401-403.

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Moeritherium lyousi (sic) [**gen. et sp. nov.**]. Upper Eocene.

Bradytherium grave [**gen. et sp. nov.**].

[Reprinted after correction as 1902d.]

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Upper Eocene, Lower Oligocene: Fayûm, Egypt.

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Eotherium aegyptiacum Owen, *Zeuglodon osiris* Dames. "possibly Mid-Eocene": Fayûm. [Reprints contain an erratum slip announcing the substitution of *Barytherium* Andr., for *Bradytherium* Andr., 1901, non *Bradytherium* Grandidier 1901. This does not constitute publication and *Barytherium* is of ANDREWS, 1901d, q.v.]

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ANDREWS, C. W. (*contd.*)

1902d. Ueber das Vorkommen von Proboscidiern in untertertiären Ablagerungen Aegyptens. *V. Int. Congr. Zool.*, Berlin, Verh., p. 528.

[A reprint of 1901a after correction of misprints. *Moeritherium lyonsi* changed to *M. lyonsi*, the correct form.]

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Evolutionary changes in the skull.

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1906. *A descriptive catalogue of the Tertiary Vertebrata of the Fayûm, Egypt.* xxxviii + 342 pp., frontispiece, 26 pls., 98 text-figs., London, Trustees of the British Museum.

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- 1912a. On the importance of Africa in vertebrate palaeontology. *J. E. Afr. Uganda nat. Hist. Soc.*, Nairobi, **2**: 109-113, 1 fig.

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Zeuglodon osiris Dames.

Quasr-el-Sagha beds (Upper Mokattam = Bartonian): N. of Lake Birket-el-Qurun, Fayûm.

Zeuglodon intermedius Dart.

Horizon and locality uncertain.

Prozeuglodon atrox Andrews.

Lower Birket-el-Qurun beds: 12 km. W.S.W. of Gar-el-Gehannem, to west of the lake [Birket-el-Qurun]. See also DART, 1923.

1923c. [Remarks on an imperfect phalangeal bone of *Chalicotherium* from Central Africa.] *Proc. zool. Soc. London*, **1923**: 1095.

Associated with *Hippopotamus* and *Phacochoerus*.

"Late Pliocene or, more probably, Pleistocene": Bunyoro side of Lake Albert [i.e., Kaiso, Uganda.]

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These Orders have a common origin.

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[Rough list in the vernacular pp. 186–197: of very little value.] Various horizons: Grotte de la Pointe-Pescade, Caverne du Grand Rocher.

ANONYMOUS, 1903. A new Egyptian mammal from the Fayûm. *Geol. Mag.*, London, (4) **10**: 529–531, 2 pls.

Probably by H. WOODWARD; largely quoted from LANKESTER, 1903, q.v.

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Review of recent work on the Australopithecinae, and on *Proconsul*, *Xenopithecus* and *Linnopithecus*.

ANONYMOUS, 1948a. New light on the proto-human types of South Africa. *S. Afr. Sci.*, Johannesburg, **1**: 111-112.

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ANTHONY, J., 1946. A propos des caractères dentaires d'un nouvel hippopotame fossile (*Hippopotamus (Tetraprotodon) protamphibius* C. Arambourg). *Bull. Mus. Hist. nat. Paris*, (2) **18**: 507-509, 1 fig.

H. protamphibius belongs to the *Choeropsis liberiensis* group, not to that of *H. amphibius*.

1948. Étude de moulages endocraniens d'hippopotames disparus. *Mém. Mus. Hist. nat. Paris*, (N.S.) **26**: 31-56, 2 pls., 9 text-figs.

Natural endocast of *H. (Tetraprotodon) protamphibius* descr. and figs. Closely related to *H. (Choeropsis) liberiensis*.

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The present-day faunal distribution discussed in the light of physical conditions during the Pleistocene.

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Ammotragus lervia Pallas, *Ursus arctos* L. "Faune ancienne" [Upper Pleistocene]. Anou, Tenechiji, Djurdjura, Algeria. *Ursus arctos* L. = *U. rouvieri* Bourg. = *U. faidherbianus* Bourg. = *U. libycus* Pomel. *Ursus spelaeus* = *U. lartetianus* Bourg. = *U. letourneuxianus* Bourg.

1929a. Découverte d'un ossuaire humain du paléolithique supérieur en Afrique du Nord. *Anthropologie*, Paris, **39**: 219-221.

Ammotragus lervia (Pall.), *Bos primigenius* Boj., in cavern deposits with aurignacian (capsian) artefacts and human remains. Afalou bou Rhummel, douar des Beni-Seghoual, Oued Marsa, Kabylia.

1929b. Les mammifères quaternaires de l'Algérie. *Bull. Soc. Hist. nat. Afr. N.*, Alger, **20**: 63-84, 3 figs.

A general review of the quaternary fauna, and a comparison with that of Europe.

1931a. Un ossuaire humain du paléolithique supérieur en Afrique du Nord. *C.R. Ass. franç. Av. Sci.*, Paris, **55**: 275-277.

Ammotragus lervia, *Bos primigenius*, *Gazella cuvieri* (?), *Ursus arctos*, *Vulpes atlanticus*, *Hystrix cristata*.

Afalou bou Rhummel, E. of Souk-el-Tenine, on corniche rd. between Bougie and Djidjelli. [No precise age given: artefacts of ibero-maurusian type.]

ARAMBOURG, C. (*contd.*)

- 1931b. Sur la longévité, en Afrique du Nord, du genre *Rhinocéros* pendant la période quaternaire. *C.R. Acad. Sci., Paris*, **192**: 1044–1046.

R. cf. simus in neolithic cavern deposits at Adrar Gueldaman, near Akbou (Constantine), and Guethna (Oran).

- 1931c. Observations sur une grotte à ossements des environs d'Alger. *Bull. Soc. Hist. nat. Afr. N., Alger*, **22**: 169–176, 1 fig.

Hippopotamus amphibius L., *Rhinoceros mercki* Kaup, *Equus* (*Zebra*) *burchelli* Gray, *Felis pardus* L., *Cervus* (*Megaceroides*) *algericus* Lydekker, *Barbalus* [*sic* for *Bubalus*] *antiquus* Duvernoy, *Bos primigenius* Boj., *Taurotragus oryx* Pallas, *Connochaetes gnu* Zimmer., *Bubalis boselaphus* Pallas, *Gazella crassicornis* Pomel, *Hystrix cristata* L., *Mus* sp. Quaternary, probably contemporaneous with mousterian cultures: near Bains-Romains, about 50 metres S. of the Algiers road. [*Anthropologie*, **44**: 360.]

- 1932a. Les ours fossiles de l'Afrique du Nord. *C.R. Soc. Biogéogr., Paris*, **9**: 29–32.

Ursus arctos larteti, *U. spelaeus minor*, lower palaeolithic levels Morocco, Tunisia, replaced by *U. arctos faid'herbi* in upper levels.

- 1932b. Note préliminaire sur une nouvelle grotte à ossements des environs d'Alger. *Bull. Soc. Hist. nat. Afr. N., Alger*, **23**: 154–162, 4 figs.

Rhinoceros mercki Kaup, *Equus* (*Zebra*) *cfr. burchelli* Gray, *Phacochoerus ethiopicus* F. Cuv., *Bos primigenius* Boj., *Bubalus antiquus* Duvernoy, *Taurotragus oryx* Pallas, *Gazella crassicornis* Pomel, *Gazella* sp., *Cervus* (*Megaceroides*) *algericus* Lydekker, *Camelus* *cfr. dromedarius* Lin., *Felis leo* Lin., *F. pardus* Lin., *Hyaena crocuta* Lin., *Lycaon* *cfr. pictus* Tem., *Canis anthus* F. Cuv., *Vulpes vulpes atlantica* Wagn., *Hystrix cristata* Lin., *Lepus timidus* Lin. Middle paleolithic: Sintès quarry, 500 metres E. of Guyotville. [*Anthropologie*, **44**: 360.]

- 1933 (1931). Un ossuaire humain du paléolithique supérieur en Afrique du Nord. *C.R. Ass. franç. Av. Sci., Paris*, **55**: 275–277.

Ammotragus lervia predominant, *Bos primigenius*, *Gazella cuvieri*, *Ursus arctos*, *Vulpes atlanticus*, *Hystrix cristata*.

[Late Pleistocene]: Afalou bou Rhummel, E. of Souk-el-Tenine, douar des Beni Segoual, dépt. de Constantine.

- 1933a. Découverte d'un gisement de mammifères burdigaliens dans le bassin du lac Rodolphe (Afrique Orientale). *C.R. Soc. géol. Fr., Paris*, **1933**: 221–222.

Mastodon aff. *angustidens* Cuv., *Aceratherium* ?sp., *Pliohyrax* sp. nov., *Brachyodus* sp., *Listriodon* sp. nov., suid nr. *Paleochoerus*, *Dorcatherium* sp. nov., antelope indet.

Lower Miocene: Mt. Losodok, W. of L. Rudolf, between Lodwar and Ferguson Gulf. [See also 1933b.]

- 1933b. Mammifères miocènes du Turkana, Afrique orientale. *Ann. Paléont., Paris*, **22**: 121–148, 2 pls., 5 text-figs.

Mastodon cf. *angustidens* Cuv., *Pliohyrax championi* sp. nov., *Aceratherium* ?sp., *Brachyodus* ?sp., *Listriodon jeanneli* sp. nov., suid indet., *Dorcatherium chappuisi* sp. nov., antelope indet.

Burdigalian: Losodok, Kenya Colony.

[*N. Jb. Min. Geol. Paläont., 1934* (3): 670; *Fortschr. Paläont., 1*, 318.]

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- 1933c. Révision des ours fossiles de l'Afrique du Nord. *Ann. Mus. Hist. nat. Marseille*, **25**: 247-301, 6 pls., 9 text-figs.

Ursus arctos mut. *larteti* Bourguignat (syn. *U. lartetianus* Bourg., *U. letourneuxianus* Bourg., *U. rouvieri* Bourg., *U. libycus* Pomel), *Ursus arctos* mut. *faidherbi* Bourguignat, *Ursus spelaeus* race *minor* Gaudry.

Detailed descriptions, figures, distribution in space and time.

Author unable to trace Bourguignat's original specimens.

[*Anthropologie*, **44**: 609-610; *Bull. Soc., Géogr. Oran*, **55**: 153-154.]

- 1934a. Les résultats géologiques de la mission de l'Omo (1932-1933). *C.R. Soc. géol. Fr.*, Paris, **1934**: 63-64.

Short faunal list.

- 1934b. Le *Dinotherium* des gisements de l'Omo. *C.R. Soc. géol. Fr.*, Paris, **1934**: 86-87.

Dinotherium bozasi sp. nov. contemporary with *Libyhipparion*, *Elephas* cf. *recki*, *Hippopotamus imagunculus*, *Hylochoerus* sp., *Strepsiceros* sp., *Damaliscus* sp.

Quaternary: lower valley of the Omo, Abyssinia.

[See 1935 (1934).]

- 1934c. Un nouveau gisement de *Libytherium*. *C.R. Ass. franç. Av. Sci.*, Paris, **58**: 124.

Title only.

- 1935 (1934). Le *Dinotherium* des gisements de l'Omo (Abyssinie). *Bull. Soc. géol. Fr.*, Paris, (5) **4**: 305-310, 1 pl.

Dinotherium bozasi Aramb. associated with *Hipparion*, *Equus* (*Zebra*?), one of *Samotherium* group, *Giraffa*, *Tragelaphus*, *Strepsiceros*, *Damaliscus*, *Hylochoerus*, *Hippopotamus*, *Elephas*. Quaternary.

[Publ. post Febr. 1935.]

- 1935a. La grotte de la carrière Anglade à Guyotville (Dépt. d'Alger). *Bull. Soc. Hist. nat. Afr. N.*, Alger, **26**: 15-22, 1 pl., 3 text-figs.

Rhinoceros mercki Kaup, *Equus* (*Zebra*) cf. *burchelli* Gray, *Hippopotamus amphibius* L., *Bos primigenius* Boj. or *Bubalus antiquus* Duvernoy, *Bubalis boselaphus* Pall., *Camelus* cf. *dromedarius* L., *Gazella* sp., rodents and bats.

Cultures middle palaeolithic (mousterian) [Upper Pleistocene].

[*Anthropologie*, **48**: 326-327.]

- 1938a. Mammifères fossiles du Maroc. *Mém. Soc. Sci. nat. Maroc*, Rabat, **46**: 1-74, 9 pls., 15 text-figs.

1. LOWER PALAEOLITHIC. *Elephas meridionalis* Nesti, aff. mut. *cromerensis* Depéret & Mayet, *Rhinoceros* (*Atelodus*) *simus* Burchell, *Equus mauritanicus* Pomel?, *Hippopotamus amphibius* Linné, *Phacochoerus africanus* (Gmelin) F. Cuvier, *Bos primigenius* Bojanus, *Gazella atlantica* Bourguignat, *Bubalis boselaphus* Pallas, *Hyaena crocuta* mut. *spelaea* Goldfuss.

2. MIDDLE PALAEOLITHIC. *Elephas atlanticus* Pomel mut. *maroccanus* nov. mut., *E. iolensis* Pomel, *Rhinoceros* (*Coelodonta*) *mercki* Kaup, *R.* (*Atelodus*) *simus* Burchell, *Equus mauritanicus* Pomel, *Asinus africanus*, *Hippopotamus amphibius* Linné, *Sus scrofa algeriensis* Pomel, *Phacochoerus africanus* (Gmelin) F. Cuvier, *Cervus* aff. *elaphus*, *Cervus* (*Megaceroides*) *algericus* Lydekker, *Bos primigenius* Bojanus, *Bos ibericus*, *Ammotragus lervia* (Pallas), *Gazella atlantica* Bourguignat, *G. dorcas* (Linné), *G. cuvieri*, *Bubalis boselaphus* (Pallas), *Hippotragus equinus*, *Taurotragus derbyanus* mut. *maroccanus* nov. mut., *Connochaetes* (*Gorgon*) *taurinus prognus* Pomel, *Camelus thomasi* Pomel?, *Canis anthus* F. Cuvier, *Vulpes*

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atlantica Wagner, *Hyaena crocuta* mut. *spelaea* Goldfuss, *Felis leo* Linné, *Felis libyca*, *Ursus arctos larteti*, *U. arctos faidherbi*, *U. spelaeus minor*, *Erinaceus algirus*, *Lepus kabylicus*, *Hystrix cristata* Linné.

3. UPPER PALAEOLITHIC. *Equus mauritanicus* Pomel, *Sus scrofa algeriensis* Pomel, *Cervus* aff. *elaphus*, *Bos primigenius* Bojanus, *Bos ibericus*, *Ammotragus lervia* (Pallas), *Capra hircus* Linné, *Gazella dorcas* (Linné), *G. cuvieri*, *Bubalis boselaphus* (Pallas), *Hippotragus equinus*, *Cervicapra redunca maupasi* (Pomel), *Camelus thomasi* Pomel?, *Canis anthus* F. Cuvier, *Vulpes atlantica* Wagner, *Hyaena striata*, *Felis leo* Linné, *Lepus kabylicus* Winton, *Hystrix cristata* Linné.

4. NEOLITHIC TO RECENT. *Elephas africanus* Blumenbach, *Rhinoceros (Atelodus) simus* Burchell on rock engravings, *Equus caballus* Linné?, *Asinus africanus*, *Sus scrofa algeriensis* Pomel, *Phacochoerus africanus* (Gmelin) F. Cuvier, *Bos primigenius* Bojanus, *Bos ibericus*, *Ammotragus lervia* (Pallas), *Ovis aries* Linné, *Capra hircus* Linné, *Gazella dorcas* (Linné), *G. cuvieri*, *Bubalis boselaphus* (Pallas), *Camelus dromedarius* Linné, *Canis anthus* F. Cuvier, *Vulpes atlantica* Wagner, *Hyaena striata*, *Felis leo* Linné. *F. libyca*, *Felis pardus* Linné, *Herpestes ichneumon*, *Erinaceus algirus*, *Lepus kabylicus* de Winton, *Hystrix cristata* Linné.

Figs. and descr. of the following, *Elephas africanus*, *E. atlanticus maroccanus*, *E. meridionalis cromerensis*, *Rhinoceros simus*, *Equus mauritanicus*?, *E. burchelli*, *E. zebra zebra*, *Asinus africanus*, *Phacochoerus africanus*, *Cervus* sp., *C. algericus*, *Bos primigenius*, *Connochaetes taurinus prognu*, *Taurotragus derbyanus maroccanus*, *Cervicapra redunca maupasi*, *Gazella atlantica*, *G. dorcas*, *Hyaena crocuta* mut. *spelaea*. [*Anthropologie*, 50: 385-387.]

1938b. La faune fossile de l'Aïn Tit-Mellil (Maroc). *Bull. Soc. Préhist. Maroc*, Casablanca, 12: 97-101.

[*Elephas atlanticus*, *Rhinoceros simus*, *Equus (Zebra) mauritanicus*, *Sus scrofa*, *Phacochoerus africanus*, *Hippopotamus amphibius*, *Cervus (Megaceroides) algericus*, gazelles, *Taurotragus derbyanus*, *Connochaetes taurinus*, *Bubalis boselaphus*, *Bos primigenius*,? *Bubalus antiquus*, *Canis anthus*, *Vulpes atlantica*, *Hyaena crocuta spelaea*, *Hystrix cristata*. Beginning of the Würm glaciation. *Anthropologie*, 49: 734-736.]

1941. Antilopes nouvelles du Pléistocène ancien de l'Omo (Abyssinie). *Bull. Mus. Hist. nat. Paris*, (2) 13: 339-347, 5 figs.

Menelikia lyrocera gen. et sp. nov., *Tragelaphus (Boocercus?) nakuae* sp. nov., *Kobus sigmoidalis* sp. nov. Older Pleistocene: Bourillé, left bank of R. Omo, S. Abyssinia.

[*Anthropologie*, 51: 195.]

1942. Sur les rapports et la distribution paléogéographique de quelques éléphants fossiles. *C.R. Acad. Sci. Paris*, 214: 630-631.

Elephas antiquus recki a member of the *E. meridionalis*-*E. hysudricus* group; *E. antiquus* not represented in Africa.

1943 (1942). L'*Elephas recki* Dietrich, sa position systématique et ses affinités. *Bull. Soc. géol. Fr.*, Paris, (5) 12: 73-89, 1 pl., 4 text-figs.

E. recki Dietrich near to *E. meridionalis* Nesti, and not a member of the group of *E. antiquus* Falconer.

1943a. Observations sur les Suidés fossiles du Pléistocène d'Afrique. *Bull. Mus. Hist. nat. Paris*, (2) 15: 471-476, 2 figs.

Phacochoerus africanus = *P. laticolumnatus* = *Stylochoerus compactus* = *Synaptochoerus hieroglyphicus* van Hoepen & van Hoepen.

South Africa; Olduvai; valley of the Omo.

Notochoerus capensis Broom = *Hylochoerus euilus* Hopwood (pro parte) = *N. meadowsi* Broom; *N. serengetensis* Dietr.

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South Africa; Olduvai; valley of the Omo.

Metridiochoerus andrewsi Hopw. = *Tapinochoerus modestus* van Hoepen = *Kolpochoerus sinuosus* van Hoepen.

South Africa; Homa (Lake Victoria); valley of the Omo.

M. euilus non Hopw. sp., Dietrich 1942.

Serengeti (Tanganyika).

Potamochoerus sp. cf. *major* Dietrich 1942 (pro parte, fig. 150-157) = *Koiropotamus* sp. Dietrich 1937; "*Sus*" *limnetes* Hopw. 1926 probably congeneric.

Serengeti; Olduvai.

Omochoerus pachygnathus gen. et sp. nov.

[Lower Pleistocene: Omo valley, S. Abyssinia.]

O. grabhami Hopw. sp. (= *Hylochoerus grabhami* Hopw.). [*Anthropologie*, 51: 195.]

- 1943b. Sur les affinités de quelques anthropoïdes fossiles d'Afrique et leurs relations avec la lignée humaine. *C.R. Acad. Sci. Paris*, 216: 593-595, phylogenetic diagram.

General discussion. *Limnopithecus* ancestral to australopithecines and man.

[*Anthropologie*, 52: 193.]

- 1943c. *La genèse de l'humanité*. Paris, *Que sais-je?*, 106: 136 pp., 36 figs., 1 phylogenetic tree.

Semi-popular discussion of human origins.

Parapithecus fraasi, *Propliopithecus haeckeli*, *Apidium phiomense*, *Prohylobates tandyi*, *Proconsul africanus*, *Limnopithecus legetet*.

- 1943d. Contribution à l'étude géologique du bassin du lac Rodolphe et de la basse vallée de l'Omo. Première partie, Géologie. *Mission scient. Omo, 1932-1933*, 1: Géol. Paléont., 2: 157-230, 3 pls., 22 text-figs., col. geol. map 1: 500,000.

Account of geology, faunal lists, discussion of age.

Lower Miocene: Losodok, Turkana, Kenya [see also 1933].

Pleistocene (Lower Kamasian): valley of the Omo, S. Abyssinia. [See also 1947a.]

1944. Les hippopotames fossiles de l'Afrique. *C.R. Acad. Sci. Paris*, 218: 602-604, 3 figs.

Hippopotamus protamphibius sp. nov.

Pleistocene: Omo (Abyssinia).

Relationship to *H. amphibius*, *H. hipponensis*, and European and Indian fossils discussed.

- 1945 (1944). Au sujet de l'*Hippopotamus hipponensis* Gaudry. *Bull. Soc. géol. Fr.*, Paris, (5) 14: 147-153, 1 pl., 1 text-fig.

Gaudry's original material re-described and discussed.

"*H. hipponensis*" from Wadi Natrun referred to *H. protamphibius* Aramb.

[Publ. post July 1945.]

1945. L'Afrique, centre d'évolution, son rôle dans l'histoire paléontologique des hominiens. *C. R. Ass. franç. Av. Sci.*, Paris, 3: 37-47, 1 fig.

General review of faunas of terrestrial vertebrates with special reference to the Hominoidea.

- 1946 (1945). *Anancus osiris* un mastodonte nouveau du Pliocène inférieur d'Egypte. *Bull. Soc. géol. Fr.*, Paris, (5) 15: 479-495, 1 pl., 7 text-figs.

Anancus osiris sp. nov.

Lower Pliocene?: near Cairo, Egypt.

Protanancus macinnesi gen. et sp. nov. for *Trilophodon angustidens kisumuensis* MacInnes, in part.

Lower Miocene: Kiboko Island, Lake Victoria.

[Publ. post. Oct. 1946.]

ARAMBOURG, C. (*contd.*)

- 1947a. Contribution à l'étude géologique et paléontologique du bassin du lac Rodolphe et de la basse vallée de l'Omo. Deuxième partie, Paléontologie. *Mission scient. Omo, 1932-1933*, 1, Géol.-Anthrop.: 232-562, 40 pls., 91 text-figs.

Dinotherium bozasi Aramb., *Elephas* (*Archidiskodon*) *recki* Dietr., *Atelodus* cfr. *germano-africanus* (Hilzh.), *Stylohipparion albertense* Hopw., *Equus* (*Hippotigris*) cf. *zebra* L., *Hippopotamus protamphibius* Aramb., *Omochoerus heseloni* (Leakey), *Metridiochoerus andrewsi* Hopw., *Notochoerus capensis* Broom, *Phacochoerus africanus fossilis* van Hoepen, *Giraffa gracilis* sp. nov., *Giraffa camelopardalis* (L.), *Sivatherium olduvaiense* (Hopw.), *Aepyceros melampus* Licht., *Gazella praethomsoni* sp. nov., *Antidorcas* sp., *Menelikinae* sub-fam. nov., *Menelikia lyrocera* Aramb., *Alcelaphus* sp., *Oryx* cf. *gazella* (L.), *Kobus* (*Kobus*) *sigmoidalis* Aramb., *Kobus* (*Kobus*) sp. [not fig.], *Redunca ancystrocera* sp. nov., *Tragelaphus nakuae* Aramb., *Strepsiceros imberbis* Blyth, *Taurotragus* cfr. *procanna* Pomel [not fig.], *Syncerus* aff. *brachyceros* (Gray), *Homotherium ethiopicum* sp. nov., *Dinopithecus brumpti* sp. nov. Discussion of age, composition and origin of fauna; faunal lists of principal localities of Pleistocene age elsewhere in Africa.

Pleistocene (equivalent of Kaiso, Kanam, Laetoli): Bourillé, lower valley of the Omo, S. Abyssinia; Nanoropus & Kalam, N.W. of Lake Rudolph, Kenya Colony.

Hippopotamus protamphibius premut. *andrewsi* mut. nov. [p. 328].

Type. *Hippopotamus hipponensis* Andrews, 1902 (not of Gaudry, 1876).

Middle Pliocene: Wadi Natrun, Egypt.

[*Anthropologie*, 54: 481-484.]

- 1947b. Sur le gisement d'*Anancus Osiris*. *C.R. Soc. géol. Fr.*, Paris, 1947: 164-166.

"Le gisement d'*Anancus Osiris* correspondrait aux très vieux niveaux du Pléistocène africain: ceux de l'Omo, de Kaiso, de Kanam, en Afrique orientale et au 'Villafranchien' des plateaux constantinois".

Type locality, Giza.

- 1947c. L'état actuel de nos connaissances sur les origines de l'homme. *Ann. Biol. Paris*, 23: 293-304.

Affinities of *Australopithecus africanus*, *Plesianthropus transvaalensis*, *Paranthropus robustus*, *Proconsul*, *Xenopithecus*, *Limnopithecus*.

- 1948 (1947). Les vertébrés fossiles des formations des plateaux Constantinois. (Note préliminaire). *Bull. Soc. Hist. nat. Afr. N.*, Alger, 38: 45-48, 1 fig.

Elephas (*Archidiskodon*) cf. *planifrons*, *Anancus* sp., *Rhinoceros* sp., *Equus numidicus*, *Hippopotamus amphibi*, a suid, *Libytherium maurusium*, *Giraffa* near *camelopardalis*, a buffalo, gazelles, antelopes, etc.

Villafranchian: El Hanech, right bank of the Oued Boucherit, region of St. Arnaud.

- 1948a. Un sivatheriné nord africain: *Libytherium maurusium* Pomel. *C.R. Soc. géol. Fr.*, Paris, 1948: 177-179, 1 fig.

Teeth and part of antler.

Villafranchian: Saint Arnaud, Algeria.

- 1948b. Les mammifères pléistocènes d'Afrique. *Bull. Soc. géol. Fr.*, Paris, (5) 17: 301-310, sketch-map.

Following faunas compared and discussed:

ABYSSINIA.

OMO. *Dinotherium bozasi*, *Archidiskodon* cf. *planifrons*, *A. recki*, *Rhinoceros simus germano-africanus*, *Stylohipparion albertense*, *Equus* cf. *zebra*, *Hippopotamus protamphibius*, *Omochoerus*, *Metridiochoerus*, *Notochoerus*, *Phacochoerus*, *Sivatherium olduvaiense*, [*Giraffa*], *Menelikia lyrocera*, *Tragelaphus*, *Kobus*, *Redunca*, *Strepsiceros*, *Taurotragus*, *Alcelaphus*, *Aepyceros*, *Gazella*, *Antidorcas*, *Syncerus*, *Homotherium*, *Dinopithecus*.

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EAST AFRICA.

SERENGETI (LAETOLIL), TANGANYIKA. *Dinotherium bozasi*, *Archidiskodon* cf. *planifrons*, *A. recki*, *Stylohipparion albertense*, *Sivatherium olduvaiense*, *Notochoerus capensis*, in common with Omo, and, in addition, *Anancus*, *Metaschizotherium hennigi*—Basal Pleistocene.

OLDUVAI, TANGANYIKA. Lacks *A.* cf. *planifrons* [a chalicothere and a mastodont are present]—Middle Pleistocene.

KAISO, UGANDA. *Archidiskodon planifrons*, *Stylohipparion albertense*, *Stegodon kaisensis*, chalicothere—beginning of Pleistocene.

KANAM, KENYA. As Kairo, with *Anancus kenyensis* and *Stegolophodon nyanzae*, but lacking *A. planifrons*.

RAWE, KENYA. Archaic proboscideans replaced by *Archidiskodon recki*—Middle Pleistocene.

KANJERA, KENYA. Elephant very close to *E. (Loxodonta) atlanticus* Pomel replaces archaic proboscideans—Middle Pleistocene.

SOUTH AFRICA.

TAUNGS. *Australopithecus*.

STERKFORTEIN. *Plesianthropus*, *Lycyaena*. Both said by Broom to be Middle Pliocene, but Sterkfontein contains *Dinopithecus*, *Notochoerus* (cf. Omo fauna), and a large horse near *E. zebra*.

KROMDRAAI. *Paranthropus*—Lower Pleistocene.

VAAL RIVER (80 ft. terraces). [Mastodon], *Archidiskodon* cf. *planifrons* (including *A. proplanifrons*, *subplanifrons*, *andrewsi*, *griqua*, *milleti*, *vanalpheni*, *yorki* etc.), *Griquatherium*, *Hippopotamus amphibius*, *Equus* sp., *Notochoerus capensis*, *Mesochocerus (Hylochoerus?) paiceae*, and, in Orange Free State near Cornelia, *Stylohipparion* cf. *albertense*, *Equus louwi* (near *E. stenonis*), *Metridiochoerus andrewsi*, *Phacochoerus africanus fossilis*, *Eurygnathohippus*.

VAAL RIVER (40 ft. terraces). *Elephas* cf. *recki* and *atlanticus*.

NORTH AFRICA.

PALIKAO nr. MASCARA, LAKE KARAR, ABOUKIR (DPT. ORAN). *Elephas (Loxodonta) atlanticus*, *Atelodus simus*, *Hippopotamus amphibius*, *Giraffa camelopardalis*, *Equus mauritanicus* and machaerodont common to all three localities, which correspond to Olduvai and Kanjera in part.

RABAT. Grits equivalent to the Oran deposits, but basal conglomerates with elephant near *Archidiskodon recki* a little older.

SÉTIF nr. CONSTANTINE. *Zygodon borsoni*, *Anancus* cf. *osiris*, *Archidiskodon planifrons*, *Hipparion sitifense*, *Stylohipparion ambiguum*, *Equus numidicus* (near *stenonis*), *Hippopotamus amphibius*, *Giraffa* cf. *camelopardalis*, *Libytherium maurusium* etc. Chronological equivalent of E. & S. African Pleistocene.

Origin and affinities of African faunas briefly discussed.

1949a. Les gisements de vertébrés villafranchiens de l'Afrique du Nord. *Bull. Soc. géol. Fr.*, Paris, (5) 19: 195–203, 2 figs.

1. *Elephas* cf. *planifrons* Falc., *Anancus osiris* Aramb., *Mastodon* cf. *borsoni* Hay, *Stylohipparion ambiguum* Pom., *Equus numidicus* Pom., *Alcelaphus* sp., *Gazella sitifensis* Pom., *Bos* sp.

Road to Sillègue, N. of Saint-Arnaud, Algeria.

2. *Anancus osiris* Aramb., *Elephas* cf. *planifrons* Falc., *E.* aff. *meridionalis* Nesti or *recki* Dietr., *Atelodus* aff. *simus* Burch., *Stylohipparion ambiguum* Pom., *Equus* sp. (ass), *Hippopotamus amphibius* L., *Omochoerus* sp., *Giraffa* sp., *Libytherium maurusium* Pom., *Bos* sp., *Bubalus* sp., *Oryx* sp., *Alcelaphus* sp., *Gazella sitifensis* Pom., *Canis* sp., *Hyaena* sp., Ain Hanech, nr. St. Arnaud, on opposite bank of Oued el Atteuch from (1).

ARAMBOURG, C. (*contd.*)

3. *Elephas* cf. *planifrons* Falc., *Anancus osiris* Aramb., *Atelodus* aff. *simus* Burch., *Stylohipparion* sp., *Equus* sp., *Hippopotamus* sp., *Libytherium maurusium* Pom., *Bos* sp., *Oryx* sp., *Redunca* sp., *Alcelaphus* sp., *Gazella* aff. *sitifensis* Pom.

N. shore of Garet Ichkeul [= Garaet Achkel], Tunisia.

4. *Elephas* cf. *meridionalis* Nesti or *recki* Dietr., *Atelodus* aff. *simus* Burch., *Equus* sp., *Oryx* sp., *Alcelaphus* sp., *Gazella* sp.

Region of Bel Hacer, Morocco.

5. *Anancus osiris* Aramb., *Elephas* cf. *planifrons* Falc. or *meridionalis* Nesti.

Fouarat, Morocco.

1949b. *Numidocapra crassicornis* **nov. gen., nov. sp.** un Ovicapriné nouveau du Villafranchien constantinois. *C.R. Soc. géol. Fr.*, Paris, **1949**: 290-291, 1 fig.

Aïn Hanech, nr. Saint Arnaud (Constantine), Algeria.

ARAMBOURG, C., & ARNOULD, M., 1950 (1949). Note sur les fouilles paléontologiques exécutées en 1947-48 et 1949 dans le gisement villafranchien de la Garaet Ichkeul. *Bull. Soc. Sci. nat. Tunisie*, Tunis, **2**: 149-157, 3 pls., 1 text-fig.

Anancus osiris rare, *Elephas* (*Archidiskodon*) cf. *planifrons* v. abundant, *Rhinoceros* cf. *etruscus* rare, *Stylohipparion libycum* fairly frequent, *Equus* sp. rare, *Hippopotamus* sp. rare, *Sus* sp. rare, *Libytherium maurusium* fairly frequent, *Camelus* sp. rare, *Redunca* sp. frequent, *Oryx* sp. rare, *Alcelaphus* sp. rare, *Gazella* cf. [sic] rare.

N. bank of Lake Garaet Ichkeul, about 10 km. W. of Tindja [Tunisia].

ARAMBOURG, C., BOULE, M., VALLOIS, H., & VERNEAU, R., 1934. Les grottes paléolithiques des Beni Segoual (Algérie). *Arch. Inst. Paléont. hum.*, Paris, **13**: 1-242, 22 pls., 48 text-figs.

1. Rock shelter of Afalou-bou-Rhumel. *Ammotragus lervia* (Pall.), *Bos primigenius* Boj., *Gazella dorcas* L., *Sus scrofa algeriensis* Pom., *Hystrix cristata* L., *Canis anthus* F. Cuv., *Vulpes vulpes atlantica* Wagn., *Ursus arctos larteti* Bourg., *U.a. faidherbi* Bourg., *Macacus inuus* (L.).

2. Rock shelter of Tamar Hat. *Elephas* sp., *Rhinoceros* sp., *Equus* sp., *Sus scrofa algeriensis* Pom., *Cervus* (*Megaceroides*) *algericus* Lyd., *Gazella dorcas* L., *Bubalis boselaphus* (Pall.), *Hippotragus equinus* (Desm.), *Bos primigenius* Boj., *B. taurus ibericus* Sanson, *Ammotragus lervia* (Pall.), *Canis anthus* F. Cuv., *Vulpes vulpes ?atlantica* Wagn., *Genetta afra* F. Cuv., *Hyaena crocuta* Erxl., *Ursus arctos?* Bourg., *U. spelaeus* Blum. race *minor* Gaudr., *Hystrix cristata* (L.), *Macacus inuus* (L.).

Pleistocene: coastal road S.E. of Bougie, Gulf of Bougie.

[*Anthropologie*, **45**: 385-390; *Fortschr. Paläont.*, **1**: 328.]

ARAMBOURG, C., & DUCCELLIER, L., 1925. ["... fossiles animaux et végétaux mis à jour ... dans la région de Maison-Carrée, près d'Alger."] *Bull. Soc. Hist. nat. Afr. N.*, Alger, **16**: 173-174.

Elephas, *Hippopotamus*, various ruminants.

Pleistocene (pre-Monastirian and pre-Milazzian).

ARAMBOURG, C., & JEANNEL, R., 1933. La mission scientifique de l'Omo. *C.R. Acad. Sci. Paris*, **196**: 1902.

Dinotherium contemporary with an elephant of the *antiquus* group.

Bourillé, valley of the Omo, S. Abyssinia.

ARLDT, T., 1908. Die alttertiäre Säugetierwelt Afrikas. *Naturw. Rdsch.*, Braunschweig, **23**: 285-287, 301-303, 316-318.

[Not seen.]

ARLDT, T. (*contd.*)

1913. Die geologische und geographische Verbreitung der Primaten. *Polit.-anthr. Rev.*, Berlin, 12: 82-96.

[Not seen.]

1915. Die Stammesgeschichte der Primaten und die Entwicklung der Menschenrassen. *Fortschr. Rassenk.*, Berlin, 1: 1-52.

[Not seen.]

1938. *Die Entwicklung der Kontinente und ihrer Lebewelt*. 2^{te} Aufl., 1: xviii + 1005 pp., Berlin.

Ethiopian region (fauna & flora) discussed on pp. 449-556.

ARNOULD, M. See ARAMBOURG & ARNOULD.

- ASHTON, E. H., & ZUCKERMAN, S., 1950a. Some quantitative dental characteristics of the chimpanzee, gorilla and orang-outang. *Philos. Trans.*, (B), London, 234: 471-484.

Statistical data computed for use in a study of the Australopithecinae.

[See 1950b.]

- 1950b. Some quantitative dental characteristics of fossil anthropoids. *Phil. Trans.*, (B), London, 234: 485-520.

Metrical study of the dentition of *Australopithecus africanus*, *A. prometheus*, *Plesianthropus transvaalensis*, *Paranthropus robustus*, *Proconsul africanus*, *Meganthropus palaeojavanicus*, *Gigantopithecus blacki*, *Eoanthropus dawsoni*.

"... in their metrical attributes these teeth are more ape-like than human."

- BAIN, A. G., 1839. Letter to Dr Andrew Smith. *Proc. geol. Soc. London*, 3: 152.

"discovery . . . of the piths and portions of the head of an ox in the alluvial banks of the Modder."

1845. On the discovery of the fossil remains of bidental and other reptiles in South Africa. *Trans. geol. Soc. London*, (2) 7: 53-59, 1 pl.

"... the skull of a kind of Buffalo . . ."

Alluvial deposit: banks of the Modder river.

1856. On the geology of southern Africa. *Trans. geol. Soc. London*, (2) 7: 175-192, 2 pls.

Extinct ruminant.

Marly alluvial soil: Bloemhoff, Division of Graaf Reinet.

- BALOUT, L., 1942. Note sur la présence des restes fossiles d'une *Addax nasomaculata* Blainv. parmi des ossements découverts au Parc d'Hydra, commune de Birmandreis (Alger). *Bull. Soc. Hist. nat. Afr. N.*, Alger, 33: 138-140, 1 pl.

Also *Bos opisthonomus*. Age uncertain, Upper Pliocene?

- BARBIN, A., 1910. Fouilles des abris préhistoriques de la Mouillah près Marnia. *Bull. Soc. Géogr. Oran*, 30: 77-90, 2 pls.

Rhinoceros, *Bos opisthonomus* Pomel, zebra, *Antilope oranensis* Pomel, *A. subkevela* Pomel, [*Alcelaphus*], deer.

Associated with ibero-maurusian industry: road from Marnia to Nemours, 5 km. N. of Marnia, Algeria. [See 1912.]

1912. Fouilles des abris préhistoriques de la Mouillah près Marnia (Deuxième campagne). *Bull. Soc. Géogr. Oran*, 32: 389-402.

Continuation of 1910. Additions to fauna, *Felis lynx*, hedgehog.

- BARBOUR, G. B. 1949a. Ape or man? An incomplete chapter of human ancestry from South Africa. *Ohio J. Sci.*, Columbus, 49: 129-145, 12 figs.
 Presidential address to the Ohio Academy of Science: a cautious general review.
 [Figs. all printed in text: photographs numbered pls. I-IX, line-drawings numbered figs. 1-3.]
- 1949b. Makapansgat. *Scient. Monthly*, Lancaster, Pa., 69: 141-147, 6 figs.
 Semi-popular account.
- BARONE, R., 1944. Exploration et fouilles des grottes du Djebel Taya. *Bull. Soc. linn. Lyon*, 13: 83-90, 1 fig.
Ursus arctos larteti, *U. spelaeus*, *Gazella atlantica*, *Ovis tragelaphus* = mouflon, *Antilope faidherbi* Bourguignat, *Bos taurus africanus* (or *ibericus*), *Hystrix cristata*, *Canis aureus* Lin.
 Quaternary: Djemâa cave, Djebel Taya, N.E. of Constantine.
- BATE, D. M. A., 1934. A fossil wart-hog from Palestine. *Ann. Mag. nat. Hist.*, London, (10) 13: 120-129, 1 pl.
 Discussion of Recent and fossil African spp., pp. 126-128.
1947. An extinct reed-rat (*Thryonomys arkelli*) from the Sudan. *Ann. Mag. nat. Hist.*, London, (11) 14: 65-71, 2 figs.
Thryonomys arkelli sp. nov.
 [Pleistocene] associated with mesolithic artefacts: Khartoum Hospital site, Sudan.
 [Anthropologie, 53: 374.]
1949. A new African fossil long-horned Buffalo. *Ann. Mag. nat. Hist.*, London, (12) 2: 396-398.
Homoioceras singae gen. et sp. nov.
 [Pleistocene]: Singa, Blue Nile, Sudan.
1950. A fossil vole from Cyrenaica. *Ann. Mag. nat. Hist.*, London, (12) 3: 981-985, 1 fig.
Microtus cyrenae sp. nov.
 Pleistocene, associated with mesolithic cultures: Ed Dabba, N.W. Cyrenaica.
- BAYLE, —, 1854. [Communication sur une collection d'ossements fossiles découverts dans les environs de Constantine.] *Bull. Soc. géol. Fr.*, Paris, (2) 11: 343-345.
 Horse, ox, antelope, hippopotamus.
 "Époque diluvienne": Mansourah plateau, S.E. of Constantine.
- BEADNELL, H. J. L., 1901a. Découvertes géologiques récentes dans la vallée du Nil et le désert Libyen. *VIII Int. Geol. Congr.*, Paris, 2: 839-866, 1 pl., 6 text-figs.
Zeuglodon in Upper Mokattam beds, = Parisian, Middle Eocene.
- 1901b. *Recent geological discoveries in the Nile valley and Libyan desert.* (An English translation of a paper communicated to the International Geological Congress, Paris, 1900.) 24 pp., folding map. 8vo.
Zeuglodon in the Upper Mokattam (= Parisian, Middle Eocene) beds.
 [Translation of 1901a. q.v., omitting all figs., map redrawn. Apparently privately printed.]
- 1901c. The Fayûm depression: a preliminary notice of the geology of a district in Egypt containing a new palaeogene vertebrate fauna. *Geol. Mag.*, London, (4) 8: 540-546.
 General account of stratigraphy: more important fossils mentioned.

BEADNELL, H. J. L. (*contd.*)

1902. *A preliminary Note on Arsinoitherium zitteli Beadn. from the Upper Eocene strata of Egypt.* 4 pp., 6 pls., Cairo, Survey Dept., Public Works Ministry.

Arsinoitherium zitteli **gen. et sp. nov.**

Upper Eocene [Lower Oligocene]: "desert bounding the Fayûm depression".

1905. *The topography and geology of the Fayum province of Egypt.* 101 pp., 24 pls., 10 text-figs. Cairo, Survey Dept.

Detailed stratigraphy, faunal list.

See also ANDREWS & BEADNELL.

BECK, R., 1906. Mastodon in the Pleistocene of South Africa. *Geol. Mag.*, London, (5) 3: 49-50, 1 fig.

Fragmentary molar of bunolophodont type.

Vaal River gravels, 60-80 ft. terrace: Waldeck Plant, nr. Kimberley.

BENNEJEANT, C., 1936. La dentition de l'*Australopithecus africanus* Dart. *Mammalia*, Paris, 1: 8-14, 1 pl., 5 text-figs.

Dentition of holotype compared with that of chimpanzee and man at equivalent periods of development. Author concludes *A. africanus* is human.

[Text-figures numbered 1-3, 5, 6: no fig. 4.]

[*Anthropologie*, 47: 206.]

BETTINI, T. M., 1941. Sull' origine dei bovini africani. *Rev. Biol. Colon.*, Roma, 4: 5-19, 4 figs.

Origin of African domestic cattle. *Bos opisthonomus* Pomel = *B. primigenius hahni* Hilzheimer.

BLANCKENHORN, M. L. P., 1900. Neues zur Geologie und Paläontologie Aegyptens (II Das Palaeogen). *Z. dtsh. geol. Ges.*, Berlin, 52: 403-479.

Detailed stratigraphy. *Zeuglodon* in Middle Eocene (Upper Mokattam beds).

1901a. Neues zur Geologie und Paläontologie Aegyptens. *Z. dtsh. geol. Ges.*, Berlin, 53: 52-132.

Detailed stratigraphy: brief account Moghara fauna.

1901b. Neues zur Geologie und Paläontologie Aegyptens—IV. Das Pliocän- und Quartärzeitalter in Aegypten ausschliesslich des Rothen Meergebietes. *Z. dtsh. geol. Ges.*, Berlin, 53: 307-502.

Detailed stratigraphy with partial faunal lists.

Upper Miocene or Lower Pliocene: Wadi Natrun.

Alluvium: Fayûm.

[*Anthropologie*, 16: 664-672.]

1903 (1902). Neue geologisch-stratigraphische Beobachtungen in Aegypten. *S.B. bayer. Akad. Wiss.*, München, 32: 341-433, 21 figs.

Faunal lists: measured sections.

1921. Aegypten in *Handb. reg. Geol.*, 7, 9: 1-244, 30 figs., 3 folding maps.

Zeuglodon, *Eosiren*, *Archaeosiren* in upper Mokattam (= uppermost Middle Eocene? + Upper Eocene) beds.

Fayûm fauna, Oligocene.

Moghara and Wadi Faregh faunas, Miocene (Burdigalian).

Wadi Natrun fauna, Upper Pliocene (Astian).

BLEICHER, 1875. Recherches sur le terrain tertiaire supérieur des environs d'Oran. *Rev. Sci. nat.*, Montpellier, 3: 577-586.

Teeth of horse, cannon-bone of large antelope.

Fluvio-marine deposit (base of Algerian Pliocene): about 4 km. S. of Oran on left of road from Tlemcen, 100 m. above sea-level.

- BLONDEL, F., 1941. Bibliographie géologique et minière de la France d'outre-mer. *Publ. Bur. Étud. géol.*, Paris, **11**: 2 vols., x + 1037 pp.
[Many references to papers not seen by us.]
- BONARELLI, G., 1947. Dinosaurio fossile del Sahara Cirenaico. *Riv. Biol. colon.*, Roma, **8**: 23-33, 3 figs.
Libycosaurus petrocchii gen. et sp. nov.
[Based on an imperfect skull and upper dentition that are clearly mammalian. The structure of the premolars suggests comparison with the anthracothere *Gelasmodon gracilis* Forster-Cooper, known only by a mandibular ramus discovered in the Upper Oligocene deposits near Dera Bugti, Baluchistan: cf. BOULE, 1910c.]
- BORY DE SAINT-VINCENT, 1841a. Sur une caverne à ossements située dans les environs d'Alger. *C.R. Acad. Sci. Paris*, **12**: 1061-1062.
Ruminants, carnivores, pachyderms.
Cavern deposit: Birmandrays, about a league and a half from Algiers.
- 1841b. Découverte d'une brèche osseuse en Algérie. *L'Institut*, Paris, **9**: 195.
Brief summary of 1841a.
- BOSWELL, P. G. H., 1950. The search for man's ancestry. *Nature, London*, **166**: 839-840.
Critical review of BROOM, 1950a.
- BOUDY, P. See DE MORGAN, CAPITAIN & BOUDY.
- BOUET, G., & NEUVILLE, H., 1930. Recherches sur le genre *Hylochoerus*. *Arch. Mus. Hist. nat. Paris*, (6) **5**: 215-301, 4 pls., 74 text-figs.
Hylochoerus euilus Hopwood, *H. grabhami* Hopwood.
- BOULE, M., 1899a. Sur quelques Equidés fossiles. *C.R. Soc. géol. Fr.*, Paris, **1899**: 131-132.
Abstract of 1900 (1899), q.v.
- 1899b. Les mammifères quaternaires de l'Algérie d'après les travaux de M. Pomel. *Anthropologie*, Paris, **10**: 563-571.
Summary and review of POMEL, 1893a, 1893c, 1894a, 1894c, 1895, 1896 (1895), 1896a, 1896d, 1897(1896)a, 1897(1896)b, 1897b, 1897d, 1898(1897).
Systematic list of mammals.
- 1900 (1899). Observations sur quelques équidés fossiles. *Bull. Soc. géol. Fr.*, Paris, (3) **27**: 531-542, 22 figs.
Equus asinus atlanticus Ph. Thomas.
Quaternary: Algeria, various localities.
- 1900a. Étude paléontologique et archéologique sur la station paléolithique du lac Karar (Algérie). *Anthropologie*, Paris, **11**: 1-21, 4 figs.
Elephas atlanticus Pomel, *Rhinoceros mauritanicus* Pomel or *R. simus*, *Equus mauritanicus* Pomel, *Hippopotamus amphibius* L., *Sus scrofa* L., *Cervus* cf. *elaphus*, *Connochaetes gnu* Zimm., *Ovis* sp., *Bubalus antiquus* Duv., *Alcelaphus* sp.
Pleistocene: 2 km. S.E. of Montagnac (or Remchi), province of Oran.
[Notes on others of Pomel's spp., viz., *Elephas iolensis*, *Hippopotamus sirensis*, *H. icosiensis*, *Sus algeriensis*, *S. barbarus*, *Connochaetes prognus*, *Bos opisthonomus* = *B. primigenius* var. *mauritanicus* Ph. Thomas, *Alcelaphus probubalis*, *A. saldensis*.]
- 1900b. Les mammifères quaternaires de l'Algérie, d'après les travaux de M. Pomel. *C.R. Soc. géol. Fr.*, Paris, **1900**: 6-7.
Brief notice of 1899b, q.v.

BOULE, M. (*contd.*)

1906. Les grottes de Grimaldi: résumés et conclusions des études géologiques. *Anthropologie*, Paris, 17: 257-289, 5 figs.

Pleistocene faunas of Europe, Africa and Mediterranean islands compared.

1910a. Sur quelques vertébrés fossiles du Sud de la Tunisie. *C.R. Soc. géol. Fr.*, Paris, 1910: 50-51.

Preliminary note. *Merycopotamus africanus* **nom. nud.**; horn-core cf. *Tragocerus amaltheus* or *Hemitragus perimensis*; antelope, size of *Palaeotragus roueni*.

Age of Maragha, Pikermi, Léberon &c [Pontian]: Draâ el Djérid.

1910b. Sur quelques vertébrés fossiles du Sud de la Tunisie. *Bull. Soc. géol. Fr.*, Paris, (4) 10: 312-313.

Practically a reprint of 1910a, with *Merycopotamus africanus* omitted.

[Publ. *post* Nov. 1910.]

1910c. Sur quelques vertébrés fossiles du Sud de la Tunisie. *C.R. Acad. Sci. Paris*, 150: 812-813.

Merycopotamus africanus has molars bearing an extraordinary resemblance to those of *M. dissimilis* Falc., but premolars appear to differ.

[*post* 21 March 1910, *ante* 2 April 1910. Another version of 1910a, 1910b. The only attempt to define *M. africanus* is that summarised here: cf. BONARELLI, 1947.]

1925c. Quelques nouveaux renseignements sur l'*Australopithecus*. *Anthropologie*, Paris, 35: 605-608.

Extended summaries of papers by Sollas, Keith, Dart and others.

1946. Les hommes fossiles. *Éléments de paléontologie humaine*. 3me édition par HENRI V. VALLOIS. xii + 587 pp., 294 figs., Paris.

Propliopithecus haeckeli, *Limnopithecus*, *Proconsul*, *Prohylobates*, *Australopithecus africanus*, *Plesianthropus transvaalensis*, *Paranthropus robustus* briefly discussed.

See also ARAMBOURG, BOULE, VALLOIS & VERNEAU.

BOURCART, J., 1927. Premiers résultats d'une étude du quaternaire marocain. *Bull. Soc. géol. Fr.*, Paris, (4) 27: 1-33.

Elephas cf. *antiquus* at Casablanca, *Alcelaphus probubalis* at Rabat.

1933a. Sur l'existence du bubale antique dans les limons de l'Oued Imar' ir' en (Haut Atlas de Marrakech) et la signification palaeoclimatique de cette trouvaille. *C.R. Acad. Sci. Paris*, 197: 1053-1055.

Bubalus antiquus. Discussion of faunal and climatic changes in the Atlas.

1933b. Au sujet des formations quaternaires du Maroc Atlantique. *C.R. Soc. géol. Fr.*, Paris, 1933: 119-120.

Subdivisions of Quaternary:

1. Pluvial period (called chellean). *Elephas antiquus*, *Rhinoceros*, *Hippopotamus amphibius*, culture of chellean or pre-chellean facies.

2. Calcareous crust; dry or desert conditions; culture facies acheulean.

3. Red formations. *Rhinoceros*, *Equus*, [*Phacochoerus*], antilopes, [*Bos*]. Sudanese climate.

4. Alluvium and black gravels with *Loxodon africanus*, [*Alcelaphus*]. Pluvial climate, forests. Upper palaeolithic cultures.

5. Period of dessication: so-called neolithic crust.

BOURCART, J. (*contd.*)

1937. Sur la découverte de molaires d'*Hipparion* à la base de la série lacustre à argiles smectiques de Camp-Berteaux (Maroc Oriental). *C.R. Soc. géol. Fr.*, Paris, 1937: 79-80.

Not *H. gracile* Kaup.

Deposit not older than Pontian.

BOURDELLE, E., 1934. Notes anatomiques et considérations zoologiques sur les zèbres. *C.R. Congr. Socs. sav. Paris & Dép.*, Paris, 67, sect. sci.: 99-112.

Brief accounts of anatomy, esp. osteology of *Equus zebra hartmanni*, *E. grevyi*, *E. chapmani*, *E. quagga*. Tables of measurements, ratios, etc.

BOURGUET, L., 1742a. *Traité des pétrifications*. 1: xvi+163 pp.; 2: 91 pp., 60 pls., Paris.

1742b. *Mémoires pour servir à l'histoire naturelle des pétrifications dans les quatre parties du monde: avec figures, et divers indices aussi méthodiques que nécessaires*. 2 parts as above, La Haye.

"Olaus Borrichius, parle des fossiles d'Egypte." (2: 27.)

"AFRIQUE"

EGYPTE. En divers endroits. Dans l'endroit nommé le Fleuve-sans-eau, de la province de *Fioum* dans la basse Egypte Occidentale.

BARBARIE. En divers endroits." (2: 56).

[These two items are identical apart from t.ps. The work was printed in Paris: some volumes were made up there by Briasson, others at The Hague by Jean Neaulme. The revised edition, Paris, 1778, has author's name on t.p.]

Reference to Borrichius probably concerns that author's, "*Hermetis, Aegyptiorum, et chemicorum sapientia ab Herm. Conringii animadversionibus vindicata*. Sumptibus P. Hauboldi: Hafniae, 1674.", 448 pp., 4°, but we were unable to trace any mention of the Fayûm in what appeared to be the relevant chapters.]

BOURGUIGNAT, J. R., 1867. Note sur un *Ursus* nouveau découvert dans la grande caverne du Thaya (Province de Constantine). *Ann. Sci. nat.*, Paris, (5) 8: 41-51.

Ursus faidherbianus sp. nov.

[Said to have been associated with a Roman lamp of the 6th cent. A.D.]

1868a. Notice prodromique sur quelques *Ursidae* d'Algérie. Paris, Bouchard-Huzard éditeur.

[Not seen. Apparently contains *Ursus lartetianus*, *U. letourneuxianus*, *U. rouvierii* spp. nov., *U. faidherbianus* Bourg., 1867.]

1868b. [Des ossements d'ours de petite taille dans les cavernes de Thaya.] *Bull. Soc. Climatol. Alger*, 5: 3.

Ursus faidherbianus.

Cavern deposit: Algeria.

1869. Notice prodromique sur quelques *Ursidae* d'Algérie. *Matér. Hist. prim. nat. Homme*, Paris, 5: 79-81.

Review of 1868a and 1867.

Ursus lartetianus, 8,000-8,500 B.C.

U. letourneuxianus, c. 5,600 B.C.

U. rouvierii, from about 4,000 B.C. to fairly recent times.

U. faidherbianus, 500 or 600 B.C. to present day (?).

BOURGUIGNAT, J. R. (*contd.*)

1870. *Histoire du Djebel Thaya et des ossements recueillis dans la grande Caverne de la Mosquée*. 108 pp., 13 pls., maps. Paris.

Pithecus inuus, *Lupulus aureus*, *Vulpes atlanticus*, *Felis leo*, *F. pardus*, *Ursus lartetianus*, *U. letourneuxianus*, *U. rouvieri*, *U. faidherbianus*, *Equus caballus*, *Sus scrofa*, *Hystrix cristata*, *Antilope faidherbi* **sp. nov.**, *A. rouvieri* **sp. nov.**, *Gazella atlantica* **sp. nov.**, *Musimon tragelaphus*, *M. lartetianus* **sp. nov.**, *M. faidherbi* **sp. nov.**, *M. rouvieri* **sp. nov.**, *M. corsicus* **nom. nov.** [= *Ovis musimon* Schreber], large ox not determined.

Cavern deposit: Algeria.

[See also 1867, 1868a, b, 1869.]

BOURJOT, A., 1868. Découverte d'une grotte à la Pointe-Pescade. *Bull. Soc. Climatol. Alger*, **5**: 78-88.

Names of spp. in vernacular, thus, "1° le bos primigenius; 2° l'antilope recticornis? ou cordieri?; 3° l'antilope dorcas; 4° l'antilope corinne; 5° le mouflon ou musimon tragelaphus, G.; 6° l'ibex, capra-ibex". Wild boar and porcupine also mentioned.

Cavern deposit: Algeria.

1869a. Excursion à la grotte de la Pointe-Pescade et détermination des espèces animales de cette station. *Matér. Hist. prim. nat. Homme*, Paris, **5**: 422-425.

Ox, *Equus*, antelopes, bear, hyaena, cat, porcupine.

[A preliminary list of no value.]

1869b. Grotte du grand rocher de Guyotville, Alger. *Matér. Hist. prim. nat. Homme*, Paris, **5**: 448-450.

Bos bubalus, *Antilope addax*, *A. corinna*, *A. dorcas*, panther, hyaena, small carnivore, ox, deer, *Capra? hispanica*, ass, associated with neolithic culture.

1869c. Détermination des ossements de mammifères trouvés dans le sol de la grotte de la Pointe-Pescade. *Bull. Soc. Climatol. Alger*, **6**: 24-27.

Bos sp., (buffalo not *B. primigenius*), *Equus* sp., three spp. of antelope—"l'Addax, la Corinne, la Dorcas", "le Bubale", two species or growth-stages of bear, *Hyaena*, *Felis* [quite uncertain, the author wrote under this genus "un tout petit metacarpien, d'un canis—indéterminable comme l'on pense"], *Hystrix*.

BRANCA, W., 1914. Bisherige Ergebnisse der Untersuchung der von Dr Reck in der Serengeti-Steppe, Deutsch Ostafrika, ausgegrabenen Reste von Säugetieren. *S.B. preuss. Akad. Wiss.*, Berlin, **1914**: 1164-1182.

General discussion of the problems involved.

1916. Ein Säugetier?-Unterkiefer aus den Tendaguru-Schichten. *Wiss. Ergebn. Tendaguru Exped. 1909-1912*, in *Arch. Biontol.*, Berlin, **4**: 137-140, 2 figs.

Internal cast of a mandibular ramus.

Cretaceous (Wealden): Tendaguru, Tanganyika Territory.

BREUNING, S., 1924. Beiträge zur Stammesgeschichte der Rhinocerotidae. *Verh. zool.-bot. Ges. Wien*, **73**: 5-46, 36 figs.

Ceratotherium simum, *Atelodus bicornis*, relationships and adaptations.

BRIVES, A., 1919. Sur la découverte d'une dent de *Dinotherium* sans la sablière du Djebel Kouif près Tebessa. *Bull. Soc. Hist. nat. Afr. N.*, Alger, **10**: 90-93, 1 fig.

Dinotherium cuvieri Kaup.

Miocene, Tortonian or Pontian.

1920. Sur la présence du *Mastodon* dans la sablière du Kouif, près Tebessa. *C.R. Soc. géol. Fr.*, Paris, **1920**: 212.

Unidentified tooth.

Miocene?

- BROOM, R., 1909a. On a large extinct species of *Bubalis*. *Ann. S. Afr. Mus.*, Cape Town, 7: 279-280.
Bubalis priscus, sp. nov.
[Pleistocene]: banks of the Modder River, half-way between Kimberley and Bloemfontein.
- 1909b. On evidence of a large horse recently extinct in South Africa. *Ann. S. Afr. Mus.*, Cape Town, 7: 281-282.
Equus capensis sp. nov.
Slab of limestone. [Pleistocene]: seashore, Yzerplaatz, Table Bay, Cape Colony.
- 1913a. Man contemporaneous with extinct animals in South Africa. *Ann. S. Afr. Mus.*, Cape Town, 12: 13-16, 2 figs.
Equus capensis, *Equus* sp., *Hippopotamus amphibius*, *Phacochoerus aethiopicus*, *Bubalus baini*, *Connochaetes antiquus* sp. nov., *Taurotragus oryx*, *Cobus venterae* sp. nov., "remains of a number of small Carnivores and Ungulates".
[Pleistocene]: Haagenstad saltpan, about 30 miles N. of Bloemfontein.
- 1913b. Note on *Equus capensis*. *Bull. Amer. Mus. nat. Hist.*, New York, 32: 437-439, 1 fig.
Pleistocene: Darling and Middleburg, Cape Colony. [*Anthropologie*, 26: 152.]
- 1925a. Some notes on the Taungs skull. *Nature, London*, 115: 569-571, 5 figs.
"A connecting link between the higher apes and one of the lowest human types."
- 1925b. On the newly-discovered South African man-ape. *Nat. Hist., New York*, 25: 409-418, 9 figs.
Popular comparative account with restorations. [*Anthropologie*, 35: 402.]
- 1925c. On evidence of a giant pig from the late Tertiaries of South Africa. *Rec. Albany Mus.*, Grahamstown, 3: 307-308, 1 fig.
Notochoerus capensis gen. et sp. nov.
Diamondiferous gravels [Pleistocene]: nr. Longlands, Vaal River.
- 1928a. On some new mammals from the Diamond Gravels of the Kimberley district. *Ann. S. Afr. Mus.*, Cape Town, 22: 439-444, 3 figs.
Notochoerus meadowsi sp. nov.
Pliocene?: no precise locality.
Equus harrisi sp. nov.
Gravels of the Middle Terrace, Pliocene: the Bend, nr. Barkly West.
Equus cawoodi sp. nov.
"Not improbably . . . Mid-Pliocene": Winter's Rush.
Equus kuhni sp. nov.
No horizon stated: Pniel.
- 1928b. Mammoths and Man in the Transvaal. *Nature, London*, 121: 324.
Comment on DART, 1927, q.v.
1929. Note on the milk dentition of *Australopithecus*. *Proc. zool. Soc. London*, 1929: 85-88, 5 figs.
Milk dentition of *Australopithecus*, chimpanzee, gorilla and man briefly compared.
1930. The age of *Australopithecus*. *Nature, London*, 125: 814.
Papio africanus Haughton, *Procapra* (*Prohyrax*) *antiqua* sp. nov., *Gypsorhynchus darti* [gen. et] sp. nov., *Pedetes gracilis* nom. nov. nud., *Palaeotragiscus longiceps* sp. nov., *Cephalophus parvus* nom. nov. nud.
Pliocene, probably Lower Pliocene: Taungs.
[On a strict reading it is doubtful whether any one of the new names is valid. *Pedetes gracilis* and *Cephalophus parvus* are certainly nomina nuda. See also 1934.]

BROOM, R. (*contd.*)

1931. A new extinct giant pig from the diamond gravels of Windsorton, South Africa. *Rec. Albany Mus.*, Grahamstown, 4: 167-168, 2 figs.

Notochoerus paiceae sp. nov. Vaal River gravels. [Pleistocene.]

1934. On the fossil remains associated with *Australopithecus africanus*. *S. Afr. J. Sci.*, Johannesburg, 31: 471-480, 7 figs.

Papio africanus Haughton, *Procavia* (*Prohyrax*) *antiqua* sp. nov., *Gypsorhynchus darti* gen. et sp. nov., *Pedetes gracilis* sp. nov., *Palaeotragiscus longiceps* gen. et sp. nov., *Cephalophus parvus* sp. nov.

Probably Lower Pleistocene: Taungs.

[The definitive descriptions of the new spp. first mentioned in 1930, q.v.]

- 1936a. A new fossil baboon from the Transvaal. *Ann. Transv. Mus.*, Pretoria, 18: 393-396, 2 figs.

Papio spelaeus sp. nov. [Pleistocene?]: "Pretoria". [*Fortschr. Paläont.*, 1: 328.]

- 1936b. A new fossil anthropoid skull from South Africa. *Nature, London*, 138: 486-488, 4 figs.

Preliminary description of a new specimen of primate provisionally "put in the same genus as the Taungs ape".

Upper Pleistocene: Sterkfontein, nr. Krugersdorp.

- 1936c. The dentition of *Australopithecus*. *Nature, London*, 138: 719, 2 figs.

Preliminary descr. & figs. of dentition of *Australopithecus transvaalensis* [sp. nov.] Broom. [Pleistocene]: Sterkfontein.

- 1937a. The Sterkfontein ape. *Nature, London*, 139: 326.

"*Australopithecus* a form whose affinities are difficult to determine". Volume of brain about 435 c.c. [*Anthropologie*, 47: 206.]

- 1937b. On some new Pleistocene mammals from limestone caves of the Transvaal. *S. Afr. J. Sci.*, Johannesburg, 33: 750-768, 8 figs.

Australopithecus transvaalensis Broom, cercopithecoid, "*Felis*" *whitei* sp. nov.

Upper Pleistocene: Sterkfontein.

[*Australopithecus transvaalensis*, here said to be sp. nov., dates from 1936c, q.v.]

Dinopithecus ingens gen. et sp. nov., *Meganthereon barlowi* sp. nov., *Elephantomys langi* gen. et sp. nov., *Cryptomys robertsi* sp. nov., *Palaeotomys gracilis* sub-gen. et sp. nov., *Mystromys hauslichneri* sp. nov.

[Pleistocene]: Schurveberg.

Procavia obermeyereri sp. nov., *Notochoerus* sp. cf. *N. paiceae* Broom.

[Pleistocene]: Uitkomst.

- 1937c. Discovery of a lower molar of *Australopithecus*. *Nature, London*, 140: 681-682, 1 fig.

A. transvaalensis Broom. Comparison with other anthropoids and man.

Middle or Upper Pleistocene: Sterkfontein, nr. Krugersdorp, Transvaal.

- 1937d. Notices of a few more new fossil mammals from the caves of the Transvaal. *Ann. Mag. nat. Hist.*, London, (10) 20: 509-514, 1 fig.

Bos makapaani sp. nov., *Thos antiquus* sp. nov., *Leptailurus spelaeus* sp. nov., *Crossarchus transvaalensis* sp. nov., *Atelerix major* sp. nov.

Pleistocene: Makapaansgat [*Bos*], Sterkfontein [*Thos*, *Leptailurus*, *Crossarchus*, *Atelerix*].

- 1938a. More discoveries of *Australopithecus*. *Nature, London*, 141: 828-829, 3 figs.

A. transvaalensis Broom.

[Horizon and locality not stated: Sterkfontein?].

BROOM, R. (*contd.*)

1938*b*. The Pleistocene anthropoid apes of South Africa. *Nature, London*, **142**: 377-379, 6 figs.

Plesianthropus **gen. nov.** for *Australopithecus transvaalensis* Broom.

Paranthropus robustus **gen. et sp. nov.**, descr. and figs.

Middle Pleistocene: Kromdraai [nr. Krugersdorp, Transvaal].

[*Anthropologie*, **48**: 645-646.]

1938*c*. Further evidence on the structure of the South African Pleistocene Anthropoids. *Nature, London*, **142**: 897-899.

Paranthropus robustus Broom, *Plesianthropus transvaalensis* (Broom).

Both spp. placed in Middle Pleistocene, and *Australopithecus* in Lower Pleistocene or Upper Pliocene.

1939*a*. The dentition of the Transvaal Pleistocene anthropoids, *Plesianthropus* and *Paranthropus*. *Ann. Transv. Mus.*, Pretoria, **19**: 303-314, 4 figs.

Plesianthropus transvaalensis (Broom), *Paranthropus robustus* Broom.

Possible relationship of these genera to other anthropoids and man.

1939*b*. The fossil rodents of the limestone cave at Taungs. *Ann. Transv. Mus.*, Pretoria, **19**: 315-317, 2 figs.

Gypsorhynchus darti Broom, *Petromys minor* **sp. nov.**

Bone breccia: cave at Buxton, Taungs.

1939*c*. A restoration of the Kromdraai skull. *Ann. Transv. Mus.*, Pretoria, **19**: 327-329, 3 figs.

Paranthropus robustus Broom, restoration of skull and mandible.

Australopithecus africanus Dart, *Plesianthropus transvaalensis* Broom, *Paranthropus robustus* Broom, addnl. figs. and descr. of mandibles.

1939*d*. A preliminary account of the Pleistocene carnivores of the Transvaal caves. *Ann. Transv. Mus.*, Pretoria, **19**: 331-338, 5 figs.

Felis leo Linn.,? *F. whitei* Broom, *Meganthereon barlowi* Broom, *Machaerodus transvaalensis* **sp. nov.**, *Thos antiquus* Broom, *Crossarchus transvaalensis* Broom.

Sterkfontein.

Felis whitei Broom.

Schurveberg, 13 miles W. of Pretoria.

Felis leo Linn., *Crocota spelaea capensis* **sub. sp. nov.**, *Hyaena striata* Zimmerman, *Canis* sp., *Thos antiquus* Broom, *Vulpes pulcher* **sp. nov.**,? *Crossarchus transvaalensis* Broom.

Kromdraai.

Leptaelurus spelaeus Broom

No locality [additional information in 1937*d*, q.v.].

1939*e*. On the affinities of the South African Pleistocene anthropoids. *S. Afr. J. Sci.*, Johannesburg, **36**: 408-411.

"The Australopithecinae were almost certainly in the human line in the Pliocene."

1939*f*. Further light on the structure of the South African anthropoids, *Plesianthropus* and *Paranthropus*. *SAMAB*, Durban, **2**: 26-27.

Additional details of skull base in each genus.

Cranial capacity of *Paranthropus* 720 c.c. est.

1940*a*. The South African Pleistocene cercopithecoid apes. *Ann. Transv. Mus.*, Pretoria, **20**: 89-100, 6 figs.

Parapapio broomi Jones, *P. whitei* **sp. nov.**, *P. jonesi* **sp. nov.**, *P. angusticeps* **sp. nov.**, *P. major* **sp. nov.**, *P. africanus* (Gear), *P. izodi* (Gear), *Papio spelaeus* Broom, *Dinopithecus ingens* Broom.

BROOM, R. (*contd.*)

Cave deposits as follows:

1. Sterkfontein: *Parapapio broomi*, *P. whitei*, *P. jonesi*, ?*Dinopithecus ingens*.
2. Kromdraai: *Parapapio angusticeps*, *P. major*, ?*P. africanus*.
3. Taungs: *P. africanus*, *P. izodi*.

1940b. Notes on the Sterkfontein anthropoid. *SAMAB*, Durban, **2**: 152.

Plesianthropus transvaalensis has no palatine extension of the maxillary antrum.

1941a. On two Pleistocene golden moles. *Ann. Transv. Mus.*, Pretoria, **20**: 215–216, 1 fig.

Proamblysomus antiquus **gen. et sp. nov.**, *Chlorotalpa spelea* **sp. nov.**, descr. and figs.
[Pleistocene] cave deposits: Sterkfontein, nr. Krugersdorp.

1941b. Structure of the Sterkfontein ape. *Nature*, London, **147**: 86, 2 figs.

Os magnum and maxillary antrum of *Plesianthropus transvaalensis* show man-like characters.

1941c. Mandible of a young *Paranthropus* child. *Nature*, London, **147**: 607–608, 1 fig.

Milk dentition of *P. robustus* compared with *Papio comatus*, *Australopithecus africanus*, *Homo sapiens*, *Pan* sp.

1941d. The origin of man. *Nature*, London, **148**: 10–14, 8 figs.

Addnl. figs. and discussion of affinities of *Australopithecus africanus* Dart, *Plesianthropus transvaalensis* (Broom), *Paranthropus robustus* (Broom), *Proconsul*.

1942a. The hand of the ape-man, *Paranthropus robustus*. *Nature*, London, **149**: 513–514, 10 figs.

Second left metacarpal with proximal phalange, and possible proximal phalange of fourth finger descr. and figd.

1942b. Some points in the anatomy of the Australopithecines. *Pamph. S. Afr. Biol. Soc.*, Pretoria, **11**: 59–60.

Australopithecines more closely related to man than is any living anthropoid.

1942c. See CLARK, J. D., 1942.

1943a. South Africa's part in the solution of the problem of the origin of man. *S. Afr. J. Sci.*, Johannesburg, **40**: 68–80, 2 figs.

Presidential address to S. Afr. Assoc. Advance. Sci. (sect. E.). Figs. of mandible of *Paranthropus robustus* Broom, and right lower dm. of *Australopithecus africanus*, *Paranthropus robustus*, *Plesianthropus transvaalensis*.

1943b. An ankle-bone of the ape-man, *Paranthropus robustus*. *Nature*, London, **152**: 689–690, 4 figs.

Astragalus descr. and fig.: comparison with Bushman ♀, chimpanzee ♀, gorilla.
[Pleistocene]: Kromdraai.

1945a. A new primitive hyaena from Sterkfontein. *SAMAB*, Durban, **3**: 273.

Lycyaena silberbergi **nom. nud.**

Revised estimates of the geological age of the S. African cave deposits,—Taungs = Middle, or lower part of the Upper, Pliocene; Sterkfontein = Upper Pliocene; Kromdraai = Lower Pleistocene.

BROOM, R. (*contd.*)

- 1945*b*. Age of the South African ape-men. *Nature, London*, **155**: 389–390, 1 fig.
 Kromdraai skull [*Paranthropus robustus*] probably Lower Pleistocene.
 Sterkfontein skull [*Plesianthropus transvaalensis*] probably Upper Pliocene.
 Taungs skull [*Australopithecus africanus*] “lower part of the Upper Pliocene, or even . . . Middle Pliocene”.
Lycyaena silberbergi n. et f.
1946. The occurrence and general structure of the South African ape-men. In BROOM & SCHEPERS, 1946.
 Monographic treatment of *Australopithecus africanus* Dart, *Plesianthropus transvaalensis* (Broom), *Paranthropus robustus* Broom.
- 1947*a*. The mandible of the Sterkfontein ape-man, *Plesianthropus*. *S. Afr. Sci.*, Johannesburg, **1**: 14–15, 1 fig.
 Mandible of old male *P. transvaalensis* (Broom).
 Author estimates that the cranium “had a brain of over 600 c.c.—perhaps even 700 c.c.”.
- 1947*b*. The upper milk molars of the ape-man *Plesianthropus*. *Nature, London*, **159**: 602, 1 fig.
P. transvaalensis Broom, upper dm. 1–2, descr. and fig.
 [Upper Pliocene]: Sterkfontein. [*Anthropologie*, **51**: 543–545.]
- 1947*c*. Discovery of a new skull of the South African ape-man *Plesianthropus*. *Nature, London*, **159**: 672, 2 figs.
P. transvaalensis Broom, skull of old female; cranial index about 66, cranial capacity about 500 c.c.
 [Upper Pliocene]: Sterkfontein. [*Anthropologie*, **51**: 543–545.]
- 1948*a*. Some South African Pliocene and Pleistocene mammals. *Ann. Transv. Mus.*, Pretoria, **21**: 1–38, 26 figs.
 Descr. and figs. of fauna from various caves as follows:
Elephantulus langi (Broom), *Mystromys hausleitneri* nom. nov. pro *M. hauslichtneri* Broom, 1937 [given in error].
 [Pleistocene]: Schurveberg.
Elephantulus antiquus sp. nov., *Atelerix major* Broom, *Crocidura* sp., *Proamblysomus antiquus* Broom, *Chlorotalpa spelea* Broom, *Meganthereon gracile* Broom, *Felis shawi* Broom, *Lycyaena silberbergi* Broom, *Thos antiquus* Broom, *Equus zietsmani* sp. nov., *Notochoerus meadowsi* Broom [with general discussion of fossil pigs of Africa], *Phacochoerus antiquus* sp. nov., *Procavia robertsi* Broom, *Mystromys hausleitneri barlowi* sub-sp. nov.
 [Upper Pliocene]: Sterkfontein.
Proamblysomus antiquus?, *Felis crassidens* sp. nov., *Canis atrox* Broom, *Thos terblanchei* Broom, *Procavia obermayerae* Broom.
 [Lower Pleistocene]: Kromdraai.
Parapapio antiquus (Haughton), *Mylomygale spiersi* Broom [gen. et sp. nov.], *Crocidura taungensis* [sp. nov.?], *Vulpes pattisoni* Broom, *Procavia antiqua* Broom, *Thallomys debruyni* Broom [sp. nov.?].
 [Middle or Upper Pliocene]: Taungs.
 [Geological horizons supplied from 1945*b*, q.v.]
- 1948*b*. The giant rodent mole, *Gypсорhynchus*. *Ann. Transv. Mus.*, Pretoria, **21**: 47–49.
 Figs. and descr. of *Gypсорhynchus minor* sp. nov.
 [Middle or Upper Pliocene]: Taungs.
Gypсорhynchus makapani sp. nov.
 [Pleistocene]: Makapan caves, nr. Potgietersrust.

BROOM, R. (*contd.*)

1949a. The lower end of the femur of *Plesianthropus*. *Ann. Transv. Mus.*, Pretoria, **21**: 181-182, 1 fig.

P. transvaalensis (Broom), addnl. descr. and fig.

[Upper Pliocene]: Sterkfontein.

1949b. Another new type of fossil ape-man. *Nature, London*, **163**: 57, 1 fig.

Paranthropus crassidens sp. nov.

[Pleistocene]: Swartkrans, Transvaal.

1950a. The genera and species of the South African fossil ape-men. *Amer. J. phys. Anthrop.*, Philadelphia, (N.S.) **8**: 1-13, 5 figs.

Five spp., probably four genera, not improbably three subfamilies, thus:

1. Australopithecinae

Australopithecus africanus

Plesianthropus transvaalensis

2. Paranthropinae

Paranthropus robustus

P. crassidens

3. Archanthropinae (?)

Australopithecus prometheus

1950b. *Finding the missing Link*. vi + 104 pp., London.

A popular account of fossil remains of higher Primates.

See also CLARK, J. D., 1942.

BROOM, R., & HUGHES, A. R., 1949. Notes on the fossil baboons of the Makapan Caves. *S. Afr. Sci.*, Johannesburg, **2**: 194-196, 2 figs.

Dinopithecus sp., *Papio darti* Broom & Jensen, *Parapapio makapani* sp. nov., *Cercopithecoides williamsi* Mollet.

"Not improbably the deposit may be Upper Pliocene."

BROOM, R., & JENSEN, J. S., 1946. A new fossil baboon from the caves at Potgietersrust. *Ann. Transv. Mus.*, Pretoria, **20**: 337-340, 2 figs.

Papio darti sp. nov., descr. and figs.

Pleistocene: [Makapan caves].

BROOM, R., & LE RICHE, H., 1937. The dentition of *Equus capensis*. *S. Afr. J. Sci.*, Johannesburg, **33**: 769-770, 1 fig.

Addnl. descr. and fig.

Upper Pliocene: Sterkfontein.

BROOM, R., & ROBINSON, J. T., 1947a. Two features of the *Plesianthropus* skull. *Nature, London*, **159**: 809-810, 2 figs.

Morphology of inner wall of orbit and of the anterior cranial fossa closely resembles the human condition. [*Anthropologie*, **51**: 543-545.]

1947b. Jaw of the male Sterkfontein ape-man. *Nature, London*, **160**: 153, 1 fig.

Mandible of old male *Plesianthropus transvaalensis*, descr. and fig.

[Upper Pliocene]: Sterkfontein.

1947c. Further remains of the Sterkfontein ape-man. *Nature, London*, **160**: 430-431, 1 fig.

Plesianthropus transvaalensis, preliminary description of right os innominatum.

[Upper Pliocene]: Sterkfontein.

BROOM, R., & ROBINSON, J. T. (*contd.*)

1948. Size of the brain in the ape-man *Plesianthropus*. *Nature, London*, **161**: 438, 2 figs.

Estimated capacity of a female(?) skull of *P. transvaalensis* 530 c.c.: mandible of a male thought to have been derived from a skull of 700–750 c.c. capacity.

- 1949a. A new mandible of the ape-man *Plesianthropus transvaalensis*. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) **7**: 123–127, 3 figs.

Preliminary descr. in some detail. Figs. of jaw partial restorations.
[Upper Pliocene]: Sterkfontein.

- 1949b. Further evidence of the structure of the Sterkfontein ape-man *Plesianthropus*. In BROOM, ROBINSON & SCHEPERS, 1949.

Skull, dentition, innominate bone of *P. transvaalensis* (Broom).

- 1949c. The lower end of the femur of *Plesianthropus*. *Ann. Transv. Mus.*, Pretoria, **21**: 181–182, 1 fig.

Brief descr. and comparison with man and chimpanzee.

- 1949d. A new type of fossil man. *Nature, London*, **164**: 322–333, 1 fig.

Telanthropus capensis sp. nov. "Somewhat allied to Heidelberg man, and intermediate between one of the ape-men and true man."

"Not improbably Lower Pleistocene": Swartkrans.

- 1949e. Thumb of the Swartkrans ape-man. *Nature, London*, **164**: 841–842, 1 fig.

Brief comparison of *Paranthropus crassidens* with chimpanzee, gorilla, orang, and Bushman.

- 1949f. A new type of fossil baboon, *Gorgopithecus major*. *Proc. zool. Soc., London*, **119**: 379–386, 1 pl., 7 text-figs.

Gorgopithecus gen. nov. for *Parapapio major* Broom, detailed description of skull and dentition.

[Pleistocene?]: Kromdraai, Transvaal.

- 1950a. Man contemporaneous with the Swartkrans ape-man. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) **8**: 151–155, 6 figs.

Broken ramus mandibulae of the right side with M¹⁻² descr. and figd. Comparisons with *Telanthropus capensis*, *Paranthropus crassidens*, *Homo sapiens*.

- 1950b. Note on the skull of the Swartkrans ape-man *Paranthropus crassidens*. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) **8**: 295–303, 2 pls., 4 text-figs.

Mandible of adult male and anterior portion of mandible of a female fig. and descr.

Restoration of skull in norma lateralis.

- 1950c. Ape or man? *Nature, London*, **166**: 843–844, 4 figs.

Paranthropus crassidens, addnl. descr. and figs. of skull and innominate bone.

"... it seems more probable that man (*Homo*) has evolved from a *Plesianthropus*-like type than from a *Paranthropus*."

- 1950d. Notes on the pelvis of the fossil ape-men. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) **8**: 489–494, 3 figs.

Preliminary description of right innominate bone of *Paranthropus crassidens* ♂. Comparisons with Bushman, orang-utan, *Plesianthropus* and *Australopithecus prometheus*.

[Upper Pleistocene]: Swartkrans.

- 1950e. One of the earliest types of man. *S. Afr. J. Sci.*, Johannesburg, **47**: 55–57, 3 figs.

Popular discussion of the zoological status of *Paranthropus crassidens*.

BROOM, R., & ROBINSON, J. T. (*contd.*)

1950f. A new sub-fossil baboon from Kromdraai, Transvaal. *Ann. Transv. Mus.*, Pretoria, **21**: 242-245, 5 figs.

Parapapio coronatus sp. nov. compared with *P. whitei* Broom, *Papio ursinus* Ker, *Mormon sphinx* Linnaeus.

[Upper Pleistocene.]

BROOM, R., ROBINSON, J. T., & SCHEPERS, G. W. H., 1949. Sterkfontein ape-man *Plesianthropus*. *Transv. Mus. Mem.*, Pretoria, **4**: 1-117, 8 pls., text-figs. 27 + 8.

See BROOM & ROBINSON, 1949b; SCHEPERS, 1949b. [*Anthropologie*, **55**: 110-115.]

BROOM, R., & SCHEPERS, G. W. H., 1946. The South African fossil ape-men, the Australopithecinae. *Transv. Mus. Mem.*, Pretoria, **2**: 1-272, 17 pls., 57 text-figs.

See BROOM, 1946; SCHEPERS, 1946. [*Anthropologie*, **51**: 89-96.]

CABRERA, A., 1928a. A new Gazelle from North Africa. *J. Mammal.*, Baltimore, **9**: 239-243.

Gazella dorcas massaesyala sub-sp. nov. *G. d. kevella*.

Recent: the Rif, Morocco.

[Not to be confused with Pomel's *Antilope (Dorcas) massoessilia*. See POMEL, 1895; JOLEAUD, 1929.]

1928b. Las formas geograficas de *Aethechinus algirus*. *Bol. Soc. esp. Hist. nat.*, Madrid, **28**: 453-455.

Aethechinus algirus lavaudeni sub-sp. nov.

Colour form only. Author expressly states the skull is indistinguishable from that of the typical form.

Recent: Mogador, Morocco.

1932. Los mamíferos de Marruecos. *Trab. Mus. Cienc. nat. Madrid*, (Zool.), **57**: 1-361, 12 pls., 34 text-figs.

Brief discussion of origin of fauna of Spanish Morocco: systematic study of Recent spp.

CAMPARDOU, J., 1917. La Grotte de Kifan bel Ghomari à Taza (Maroc). *Bull. Soc. Géogr. Oran*, **37**: 2-26, 8 pls. [4 printed as text-figs. but numbered as pls. 1-4.]

Canis aureus L., *C. hypsogenys* Nob. [i.e. DOUMERGUE], *C. niloticus* Geoffroy, *Hyaena striata* Zimm., *H. crocuta* Erxleb. sub. *spelaea*, *Felis leo* L., *F. pardus* L., *F. libyca* Oliv., *Herpestes ichneumon* L., *Ursus lartetianus* Bourg., *U. rouvieri* Bourg., *Erinaceus algirus* Duv., *Lepus aegyptius* Desm. var. *tingitanus* Nob. [i.e. DOUMERGUE], *Equus caballus mauritanicus* Pomel?, *Equus (asinus) africanus* Sans., *Rhinoceros subinermis* Pom., *Sus algeriensis* Pom., *Bos ibericus* Sanson, *B. ibericus* var., *B. opisthonomus* Pomel, *Bubalus antiquus* Pomel, *Ovis tragelaphus* Desm., *O. aries* L., *Capra hircus* L., *Oreas procanna* Pomel?, *Oryx leucoryx* Blainv., *Gazella dorcas* Pallas, *G. kevella* Pall., *G. atlantica* Bourg., *Alcelaphus bubalis* Pallas, *Cervus (elaphus) barbarus* Benn., *Camelus* sp.?

Of these, *C. hypsogenys*, *H. crocuta spelaea*, *U. lartetianus*, *U. rouvieri*, *E. caballus mauritanicus*, *R. subinermis*, *S. algeriensis*, *Bubalus antiquus*, and *G. atlantica* are restricted to lower layers with mousterian cultures.

Upper Pleistocene.

[Faunal list on p. 17 and geological age by DOUMERGUE. *Canis hypsogenys* and *Lepus aegyptius* var. *tingitanus* may be **nn. nov.**, if so they appear to be **nomina nuda**. We have not found formal descriptions elsewhere.]

CAPITAIN, G. See DE MORGAN, CAPITAIN, & BOUDY.

- CARRIÈRE, G., 1886. Quelques stations préhistoriques de la province d'Oran. *Bull. Soc. Géogr. Oran*, **6**: 136–154, 3 pls.
1. Abundant remains of elephant, rhinoceros, hippopotamus and horse. Associated with chellean implements in quartzite: Ternifine, a few metres from village of Palikao, about 20 km. from Mascara in plain of Eghris.
 2. Bones of gazelle, etc. Santa-Cruz, neighbourhood of Oran.
- CAUVET, G., 1937. Le dromadaire de l'Oued Itel. *Bull. Soc. Hist. nat. Alger*, **28**: 513–526, 1 pl.
- Dromedary in N. Africa from Middle Pleistocene onwards.
Some discussion of a race with 36 to 39 teeth instead of the normal 34.
Prehistoric (pre-Islamic): Oued el Hamara, Haut Oued Itel, Algeria.
- CHOUBERT, G., 1946 (1945). Note préliminaire sur le Pontien au Maroc (Essai de synthèse orogénique du Maroc atlasique). *Bull. Soc. géol. Fr.*, Paris, (5) **15**: 677–764, 7 figs.
- Stratigraphical lists of mammalian faunas of Algeria and Tunisia.
Hipparion cf. *gracile*, mastodonts and other mammals near Camp-Berteaux.
Long list of references, mainly stratigraphical.
[Publ. post Nov. 1946.]
See also MARÇAIS & CHOUBERT.
- CHOUBERT, G., & ENNOUCHI, E., 1946. Premières preuves paléontologiques de la présence du Pontien au Maroc. *C.R. Soc. géol. Fr.*, Paris, **1946**: 207–208.
- Mastodon* cf. *angustidens* Cuvier [limb-bones and fragment of tusk], *Hipparion* indet.
Tortonian: Camp-Berteaux (Gara Ziad).
Mastodon aff. *longirostris* Kaup.
Pontian: banks of Oum er Rebia, below Zidania, plain of Tadla-Beni-Amir.
Mastodon near *M. arvernensis* Croizet & Jobert.
Upper Pliocene: Fouarat, near Port Lyautey.
- CHUBB, E. C., 1909 (1908). List of vertebrate remains [*in* WHITE, F., 1909 (1908), q.v.].
- Insectivora, *Felis leo*, *Felis* spp. (one about the size of a leopard, one of *F. ocreata*, lower jaw cf. *F. serval*), Viverridae, *Hyaena* sp., *Tatera* sp., *Otomys* sp., *Mus* spp., Bathyergidae, *Hystrix* sp., *Phacochoerus aethiopicus* Pall., *Elephas africanus* Blumenb., *Diceros whitei* Chubb, *Equus* sp., *Connochaetes taurinus* Burch., *Strepsiceros strepsiceros* Pall., *Taurotragus oryx*.
[Pleistocene: Broken Hill, N.W. Rhodesia.]
See also MENNELL & CHUBB.
- CHUDEAU, 1909. [Le Sahara soudanais, p. 281.]
- [Not seen: from it JOLEAUD (1920a: 23) quoted "ossements d'Hippopotames dans la saline de Taoudeni".]
- CLARK, J. D., 1942. Further excavations (1939) at Mumbwa Caves, Northern Rhodesia. *Trans. roy. Soc. S. Afr.*, Cape Town, **29**: 133–201, 3 pls., 17 text-figs.
- Mammals, identified by BROOM:
Canis familiaris, *Thos adustus* probably, *Hyaena brunnea*, *Cercopithecus* sp., *Orycteropus*, porcupine, wart-hog, *Thryonomys*, apparently *Connochaetes taurinus*, *Cervicapra*, *Cephalophus*, *Bos taurus* dom. not buffalo.
Iron age.
Kudu, *Cephalophus*, *Connochaetes taurinus*, porcupine, wart-hog, *Equus*, *Hippotragus equinus*, *Taurotragus oryx*, *Cervicapra*.

CLARK, J. D. (*contd.*)

Wilton industry.

Equus (? Zebra), *Hyaena brunnea*, *Cervicapra*, *Bubalis*, wart-hog.

Stillbay industry.

[Nominal lists only: neither fig. nor descr.]

See also COOKE & CLARK.

CLARK, W. E. LE GROS, 1946. Significance of the Australopithecinae. *Nature, London*, **157**: 863-865.

Review of BROOM & SCHEPERS, 1946, q.v.

1947a. The British-Kenya Miocene expedition, 1947. *Nature, London*, **160**: 891-892.

Preliminary general account.

[*Anthropologie*, **52**: 179.]

1947b. Observations on the anatomy of the fossil Australopithecinae. *J. Anat. London*, **81**: 300-333, 1 pl., 12 text-figs.

Detailed discussion of the affinities of *Australopithecus*, *Paranthropus*, *Plesianthropus*.

[*Anthropologie*, **53**: 83-85.]

1947c. The importance of the fossil Australopithecinae in the study of human evolution. *Sci. Progr. Twent. Cent.*, London, **35**: 377-395, 1 fig.

General comparison of Australopithecinae with the human subject. The fossil genera may represent slightly modified survivors of the ancestral human stock.

1947d. The Pan-African Congress on Prehistory. *Nature, London*, **159**: 216-218. Summary of proceedings.

1948a. Observations on certain rates of somatic evolution in the Primates. *Roy. Soc. S. Afr., Spec. Publ.*, Robert Broom commem. vol.: 171-180.

Evolutionary status of *Proconsul*, *Paranthropus*, *Plesianthropus*, *Libypithecus*.

1948b. African fossil primates discovered during 1947. *Nature, London*, **161**: 667-669.

General account. *Proconsul*, *Xenopithecus*, *Limnopithecus* mentioned.

1949. Early Miocene apes from East Africa. *Adv. Sci.*, London, **5**: 340-341.

Brief review of recent discoveries of *Proconsul*, *Limnopithecus* and an un-named species.

1950a. South African fossil hominoids. *Nature, London*, **166**: 791-792, 1 fig.

Comparative account of milk dentition of *Homo sapiens*, *Paranthropus*, and chimpanzee.

1950b. New discoveries of the Australopithecinae. *Nature, London*, **166**: 758-760.

Review of BROOM, ROBINSON, & SCHEPERS, 1949, q.v.

1950c. New palaeontological discoveries bearing on the evolution of the Hominoidea. *Quart. J. geol. Soc., London*, **105**: 225-259, 5 pls., 10 text-figs.

General review of discoveries in East and South Africa.

CLARK, W. E. LE GROS, & LEAKEY, L. S. B., 1950. Diagnoses of East African Miocene Hominoidea. *Quart. J. geol. Soc., London*, **105**: 260-262.

Proconsul nyanzae sp. nov., *Sivapithecus africanus* sp. nov., *Limnopithecus macinnesi* sp. nov.

L. Miocene: Rusinga Island, Kenya Colony.

Proconsul major sp. nov.

L. Miocene: Songhor, Kenya Colony.

Proconsul africanus Hopwood, *Limnopithecus legetet* Hopwood.

L. Miocene: Koru, Kenya Colony.

[Appendix to CLARK, 1950d, q.v.]

COOKE, H. B. S., 1939. On a collection of fossil mammalian remains from the Vaal River gravels at Pniel. *S. Afr. J. Sci.*, Johannesburg, **36**: 412-416, 2 figs.

Equus (*Sterrohippus*) *poweri* sp. nov., *E. capensis* Broom, *E. cf. cawoodi* Broom, *E. (Hippotigris) burchelli* (Gray), *Alcelaphus* sp., *Connochaetes* sp., *Kobus* aff. *ellipsiprymnus*, cf. *Taurotragus* sp., *Hippopotamus amphibius* (Linn.), *Hippopotamus* sp., *Phacochoerus aethiopicus* (Pall), *Archidiskodon* sp.

Younger gravels of the Vaal River of "generally Middle Pleistocene age".

1941a. A preliminary account of the Wonderwerk Cave, Kuruman District. Section II. The fossil remains. *S. Afr. J. Sci.*, Johannesburg, **37**: 303-312, 4 figs.

Hystrix africae-australis Peters, *Syncerus caffer* (Sparrman), *Peloroceros helmei* (Lyle), *Alcelaphus caama* (Cuvier), *Connochaetes* sp., *Damaliscus* cf. *pygargus* (Pallas), *Antidorcas marsupialis* (Zimmermann), *Hippotragus* sp., *Taurotragus oryx* (Pallas), *Phacochoerus* cf. *aethiopicus* (Pallas), *Ceratotherium simum* (Burchell), *Equus burchelli* (Gray), *Equus quagga* Gmelin, *E. kuhni* Broom, *E. capensis* Broom.

"... probable that the bulk of the material is Later Stone Age and partly Middle Stone Age."

[Middle Stone Age = U. Pleistocene; Later Stone Age = Holocene. Fauna mixed; not collected stratigraphically.] [*Anthropologie*, **52**: 123.]

1941b. A preliminary survey of the Quaternary period in South Africa. *Bureau of Archaeology, Archaeol. Ser.*, **4**: 1-59, 8 figs.

[Not seen: summary in *Anthropologie*, **53**: 101-107.]

1943. Cranial and dental characters of the recent South African Equidae. *S. Afr. J. Sci.*, Johannesburg, **40**: 254-257, 1 fig.

Equus zebra, *E. quagga*, *E. burchelli*.

1947 (1946). The development of the Vaal River and its deposits. *Trans. geol. Soc. S. Afr.*, Johannesburg, **49**: 243-262, 5 pls., 5 text-figs.

The geological portion of 1949b, q.v.

[*Anthropologie* **54**: 113-116.]

1947a. Variations in the molars of the living African elephant and a critical revision of the fossil Proboscidea of Southern Africa. Part I. *Amer. J. Sci.*, New Haven, **245**: 434-457, 7 figs.; Part II. *op. cit.*: 492-517, 7 figs.

Dentition of *Loxodonta africana* descr. and variation discussed.

Revision, probable relationships, and stratigraphical occurrence of *Gomph[?]otherium*, *Mammuthus* (*Metarchidiskodon*) *griqua* (Haughton), *M. (Archidiskodon) subplanifrons* Osborn, *M. (A.) vanalpheni* Dart., *M. (A.) broomi* Osborn, *Loxodonta (Palaeoloxodon) transvaalensis* (Dart), *L. (P.) darti* Cooke, *L. (P.) hanekomi* (Dart), *L. (P.) zulu* Scott, *L. (P.) wilmani* (Dart), *L. (P.) archidiskodontoides*, *L. (Loxodonta) africana* (Blumenbach).

1947b. Some fossil hippotragine antelopes from South Africa. *S. Afr. J. Sci.*, Johannesburg, **43**: 226-231, 2 figs.

Hippotragus problematicus, sp. nov.

[Pleistocene]: Bloembosch, Darling district, Cape Province.

Hippotragus niger (Harris).

[Pleistocene]: Sterkfontein.

Hippotragoides broomi gen. et sp. nov.

[Pleistocene]: Sterkfontein.

1948a. The Fowler collection of fossils from Koffiefontein O.F.S. *S. Afr. Sci.*, Johannesburg, **2**: 96-98.

Equus fowleri Wells, *E. plicatus* van Hoepen, *E. cf. kuhni* Broom, *E. cf. capensis* Broom, *E. quagga* Gmelin, *E. burchellii* Gray, *Equus* sp., *Hippopotamus* sp., *Phacochoerus aethiopicus* Pallas, *P. compactus* E. C. N. & H. E. van Hoepen, *Phacochoerus* sp., *Connochaetes*

COOKE, H. B. S. (*contd.*)

sp., *Strepsiceros* sp., *Taurotragus* sp., *Syncerus caffer* Sparrman, *Bubalus baini* Seeley, *Peloroceras helmei* Lyle, *Damaliscus* sp., *Kobus* cf. *ellipsiprymnus* Ogilby, *Aepyceros melampus* Lichtenstein.
[Upper Pleistocene.]

1948b. The search for man's ancestors. *S. Afr. Sci.*, Johannesburg, 2: 34-36.

Brief popular account of African fossil primates excluding man.
[Separates are folders of quarto size without page numbers.]

1949a. The fossil Suina of South Africa. *Trans. Roy. Soc. S. Afr.*, Cape Town, 32: 1-44, 19 figs.

Hippopotamus amphibius Linnaeus = *H. ponderosus* Scott, 1907, = *H. a.* var. *robustus* Fraas, 1907, = *H. a.* var. *venteri* Lyle, 1931, = *H. westphali* Lyle, 1931, = *H. helmei* Lyle, 1931; *Potamochoerus koiropotamus* (Desmoulins); *Phacochoerus africanus* (Gmelin) = *P. aeliani* auctt. = *P. stenobunus* Pia, 1930; *P. aethiopicus* (Pallas) = *Aper aethiopicus* Pallas, 1767, = *Phacochoerus venteri* Dreyer & Lyle, 1931, = *P. meiringi* Dreyer & Lyle, 1931; *P. helmei* Dreyer & Lyle = *P. africanus* van Hoepen & van Hoepen, 1932, = *P. laticolum-natus* van Hoepen & van Hoepen, 1932, = *P. aethiopicus* Shaw, 1939; *P. compactus* (van Hoepen & van Hoepen) = *Stylochoerus compactus* van Hoepen & van Hoepen = *Synapto-choerus hieroglyphicus* van Hoepen & van Hoepen, 1932, = *Phacochoerus aethiopicus*? Shaw, 1939; *P. altidens* Shaw & Cooke; *Notochoerus capensis* Broom, non *N. capensis* syn. *meadowsi* Shaw, 1938; *Tapinochoerus meadowsi* (Broom) = *Notochoerus meadowsi* Broom, 1928, = *Phacochoerus meadowsi* Dreyer & Lyle, 1931, = *Kolpochoerus sinuosus* van Hoepen & van Hoepen, 1932, = pars *Notochoerus capensis* syn. *meadowsi* Shaw, 1938; *Tapinochoerus modestus* van Hoepen & van Hoepen = *Notochoerus broomi* Shaw & Cooke, 1941; *Mesochoerus paiceae* (Broom) = *Notochoerus paiceae* Broom, 1931. All above critically revised, many refigured.

Following E. African spp. listed and discussed:

Sus limnetes, *Potamochoerus majus*, *Phacochoerus africanus* (or *aethiopicus*), *P. complecti-dens*, *Afrochoerus nicoli*, *Metridiochoerus* sp., *Mesochoerus heseloni*, *M. olduvaiensis*, *Noto-choerus dietrichi*, *Pronotochoerus jacksoni*, *Gerontochoerus scotti*.

1949b. Fossil mammals of the Vaal River deposits. *Mem. geol. Surv. S. Afr.*, Pretoria, 35, 3: 117 pp., 27 pls., 14 text-figs. including maps.

Addnl. descr. and figs. of many spp. fr. Pleistocene deposits as under:

1. *Loxodonta* (*Palaeoloxodon*) cf. *zulu* Scott.

Below Parys.

2. *Equus sandwithi* Haughton, *E. capensis* Broom, *Equus* sp., *Hippopotamus amphibius* Linnaeus, *Phacochoerus* cf. *africanus* (Gmelin), *Bubalus bainii* Seeley, cf. *Syncerus caffer* Sparrman, *Peloroceras helmei* (Lyle), *Loxodonta* (*Palaeoloxodon*) *transvaalensis* (Dart).

"C" and "D" gravels: Sheppard Island.

3. *Hippopotamus amphibius* Linnaeus, *Connochaetes gnou* (Zimmermann). Bloemhof.

4. *Stylohipparion steytleri* van Hoepen, *Equus* cf. *quagga* Gmelin, *Hippopotamus amphibius* Linnaeus, *Connochaetes gnou* (Zimmermann), *Loxodonta* (*Palaeoloxodon*) *hanekomi* (Dart), *L. (P.) zulu* Scott, *L. (P.) wilmani* (Dart). Christiana.

5. *Equus kuhni* Broom.

Schoolplaats No. 1, above the Warrenton Weir.

6. *Equus burchellii* Gray, *Crocota crocuta* (Erxleben), *Bubalus bainii* Seeley. River silts: Warrenton.

COOKE, H. B. S. (*contd.*)

7a. *Equus poweri* Cooke.

Windsorton, 35 foot shaft, Lot 197, Riverview Estates Area.

7b. *Equus* cf. *burchellii* (Gray), *E.* cf. *quagga* Gmelin, *E. capensis* Broom, *E. plicatus* van Hoepen, *Equus* sp., *Hippopotamus amphibius* Linnaeus, *Phacochoerus compactus* (van Hoepen & van Hoepen), *Phacochoerus* sp., *Peloroceras helmei* (Lyle), *P. broomi* sp. nov., *Damaliscus* cf. *lunatus* (Burchell), *Connochaetes* sp., *Loxodonta* (*Palaeoloxodon*) sp.

Halliwell's Workings, Riverview Estates Area.

7c. *Equus* cf. *burchellii* Gray, *E. kuhni* Broom, *E. plicatus* van Hoepen, *E. capensis* Broom, *Hippopotamus amphibius* Linnaeus, *Phacochoerus aethiopicus* (Pallas), *P. altidens* Shaw and Cooke, *Alcelaphus robustus* sp. nov., *Damaliscus* cf. *pygargus* (Pallas), *Bubalus bainii* Seeley.

Larsen's Main Workings, Riverview Estates Area.

7d. *Equus burchellii* Gray, *E. plicatus* van Hoepen, *E. sandwithi* Haughton, *E. capensis* Broom, *Hippopotamus amphibius* Linnaeus, *Phacochoerus compactus* (van Hoepen & van Hoepen), *Syncerus caffer* Sparrman, *Alcelaphus robustus* sp. nov., [the lower molars from this site are paratypes], *Connochaetes* sp.

Larsen's Shaft 47, Riverview Estates Area.

7e. *Equus plicatus* van Hoepen, *E.* cf. *kuhni* Broom, *Equus* sp., *Phacochoerus* cf. *helmei* Dreyer & Lyle, *Aepyceros melampus* (Lichtenstein).

Homestead Area, Riverview Estates Area.

7f. *Equus kuhni* Broom, *E. plicatus* van Hoepen, *Loxodonta* (*Palaeoloxodon*) cf. *zulu* Scott, *Syncerus caffer* Sparrman, *Hippopotamus amphibius* Linnaeus, Bovidae indet.

River-bed above the island, Riverview Estates Area.

7g. *Equus burchellii* Gray, *Hippopotamus amphibius* Linnaeus, *Strepsiceros strepsiceros* (Pallas), *Syncerus caffer* Sparrman, *Loxodonta* (*Palaeoloxodon*) *hanekomii* (Dart).

Old Pont Site, Riverview Estates Area.

7h. *Equus burchellii* Gray, *E.* cf. *capensis* Broom, *Hippopotamus amphibius* Linnaeus, *Phacochoerus* sp., "*Kobus*" *altidens* sp. nov., *Hippotragus niger* (Harris), cf. *Connochaetes gnou* (Zimmermann).

Keeble's Paddock, Riverview Estates Area.

7i. *Loxodonta* (*Palaeoloxodon*) cf. *wilmani* (Dart), *Hippopotamus amphibius* Linnaeus.

The river-bed below the island, Riverview Estates Area.

7j. A list of specimens from unknown sites in the Windsorton-Riverview Estates Area. *Mesochorus paiceae* (Broom) is the only species not recorded above.

8. *Hippopotamus amphibius* Linnaeus.

Kraanvogelvallei Breakwater.

9. *Equus* cf. *capensis* Broom, *Hippopotamus amphibius* Linnaeus, cf. *Hippotragus niger* (Harris), cf. *Strepsiceros strepsiceros* (Pallas).

Morris Draai.

10. *Connochaetes* sp., *Peloroceras broomi* sp. nov.

Bestpan, Riverton.

11. *Equus burchellii* Gray, *E. harrisi* Broom, *E. capensis* Broom, *Phacochoerus africanus* (Gmelin), *Hippopotamus amphibius* Linnaeus.

Riverton.

12. *Aepyceros melampus* (Lichtenstein), *Connochaetes* sp., *Peloroceras broomi* sp. nov., *Syncerus caffer* Sparrman.

Willowbank.

COOKE, H. B. S. (*contd.*)

13. *Equus poweri* Cooke, *E. capensis* Broom, *E. harrisi* Broom, *E. cf. kuhni* Broom, *E. cf. sandwithi* Haughton, *E. burchellii* Gray, *E. cf. quagga* Gmelin, *Mammuthus* (*Archidiskodon*) *cf. broomi* Osborn, *Loxodonta* (*Palaeoloxodon*) sp., *Taurotragus oryx* (Pallas), *Damaliscus cf. albifrons* (Burchell), *Connochaetes* sp., *cf. Alcelaphus caama* (Cuvier), *Peloroceras helmei* (Lyle), *P. broomi* sp. nov., *Sylvicapra grimmia* (Linnaeus), *Gazella wellsi* sp. nov., *Hippopotamus amphibius* Linnaeus, *Phacochoerus aethiopicus* (Pallas), *P. africanus* (Gmelin), *P. cf. compactus* (van Hoepen & van Hoepen), *P. altidens* Shaw & Cooke.
Vaal River, near Nooitgedacht (Power's site).

14. *Equus harrisi* Broom, *E. broomi* Cooke.
The Bend, a little nearer to Barkly West than Power's site.

15. *Equus burchellii* Gray, *E. cf. kuhni* Broom, *E. harrisi* Broom, *Equus* sp., *Loxodonta* (*Palaeoloxodon*) *cf. zulu* Scott, *Hippopotamus amphibius* Linnaeus, *Phacochoerus cf. helmei* Dreyer & Lyle, *cf. Syncerus caffer* (Sparrman), *Connochaetes cf. taurinus* (Burchell), *Alcelaphus robustus* sp. nov., *Damaliscus* sp., *Antidorcas marsupialis* (Zimmermann).
Specimens in McGregor Memorial Museum, Kimberley, labelled "Barkly West".

16. *Equus burchellii* Gray, *E. kuhni* Broom, *E. capensis* Broom, *Equus* sp., *Mammuthus* (*Archidiskodon*) *broomi* Osborn, *Loxodonta* (*Palaeoloxodon*) *zulu* Scott, *Loxodonta* (*Palaeoloxodon*) *africana* (Blumenbach), *Hippopotamus amphibius* Linnaeus, *Phacochoerus aethiopicus* (Pallas), *Mesochoerus paiceae* (Broom), *Peloroceras helmei* (Lyle), *Connochaetes gnou* (Zimmermann), *Taurotragus* sp.
Pniel.

17. *Equus cf. burchellii* Gray, *E. cf. quagga*, *E. capensis* Broom, *E. cf. kuhni* Broom, *E. plicatus* van Hoepen, *Hippopotamus amphibius* Linnaeus, *Phacochoerus aethiopicus* (Pallas), *Tapinochoerus modestus* (van Hoepen & van Hoepen), *Gomphotherium* sp., *Loxodonta* (*Palaeoloxodon*) *cf. zulu* Scott.
Waldeck's Plant.

18. *Equus capensis* Broom, *E. cf. plicatus* van Hoepen, *Peloroceras helmei* (Lyle), *Mammuthus* (*Archidiskodon*) *subplanifrons* Osborn.
Gong-Gong.

19. *Equus cf. burchellii* Gray, *E. kuhni* Broom, *Hippopotamus* sp.
Forlorn Hope.

20. *Equus burchellii* Gray.
Niekerk's Rush.

21. *Equus burchellii* Gray, *E. capensis* Broom, *Hippopotamus amphibius* Linnaeus, *Notochoerus capensis* Broom, *Crocota crocata* (Erxleben).
Longlands.

22. *Equus capensis* Broom, *E. sandwithi* Haughton, *Hippopotamus amphibius* Linnaeus, *Loxodonta* (*Palaeoloxodon*) *cf. zulu* Scott.
Austin's Rush.

23. *Equus cawoodi* Broom [placed in synonymy of *E. capensis* Broom].
Winter's Rush.

24. *Equus cf. burchellii* Gray, *Hippopotamus amphibius* Linnaeus, *Damaliscus* sp., *Mammuthus* (*Archidiskodon*) *subplanifrons* Osborn, *M. (A.) vanalpheni* Dart, *Loxodonta* (*Palaeoloxodon*) *archidiskodontoides* (Haughton).
Sydney-on-Vaal.

25. *Equus cf. capensis* Broom, *E. cf. poweri* Cooke, *Hippopotamus* sp., *Damaliscus* sp., *Peloroceras helmei* (Lyle), *cf. Taurotragus* sp., *Aepyceros melampus* (Lichtenstein), *Loxodonta* (*Palaeoloxodon*) *hanekomi* (Dart), *L. (P.) zulu* Scott.
Delpert's Hope.

COOKE, H. B. S. (*contd.*)

26. *Equus capensis* Broom, hippopotamus canines.
Schmidt's Drift.

27. "An unworn lower right third molar . . . very probably of *Peloroceras broomi*."
David's Drift.

28. cf. *Diceros bicornis* (Linnaeus), *Peloroceras helmei* (Lyle).
Draaihoek.

29. A long list of species from unknown localities includes *Griquatherium haughtoni* sp. nov.

Author discusses distribution and stratigraphy in detail and concludes that the fauna as a whole is broadly equivalent to that of Olduvai, but that some of the more primitive spp. are closer to those found in the deposits of the Omo River. He also suggests that, although the Transvaal cave deposits at Sterkfontein and in the Makapan valley are somewhat older than the Vaal River gravels, there is an overlap in time. [Apparently all the S. African deposits mentioned belong to the Lower and Middle Pleistocene.]

1950. A critical revision of the Quaternary Perissodactyla of Southern Africa.
Ann. S. Afr. Mus., Cape Town, **31**: 393-479, 30 figs.

Diceros bicornis (Linnaeus) = *Opsiceros simplicidens* (pars) Scott 1907 = *Diceros whitei* (pars) Chubb 1907; *Ceratotherium simum* (Burchell) = *Opsiceros simplicidens* Scott 1907 = *Rhinoceros scotti* Hopwood 1926; *Diceros whitei* Chubb 1907, based on artiodactyl humerus, and on tibia not distinguishable from that of *D. bicornis*; *Eurygnathohippus cornelianus* van Hoepen; *Notohipparion namaquense* Haughton; *Stylohipparion steytleri* (van Hoepen) = *Stylohipparion hipkini* van Hoepen 1932; *Equus burchellii* (Gray) = *Equus quagga wahlbergi* of most authors = *E. platyconus* van Hoepen 1930 = *E. simplicissimus* van Hoepen 1930 = *Kraterohippus elongatus* van Hoepen 1930 = *Equus lylei* Dreyer 1931; *Equus zebra* Linnaeus; *Equus quagga* Gmelin, non *E. quagga quagga* Dreyer 1931, nec *E. quagga* var. Haughton 1932; *Equus capensis* Broom = *E. cawoodi* Broom 1928 = *E. gigas* van Hoepen 1930 = *E. westphali* Dreyer 1931 (non *E. cawoodi* van Hoepen 1930, nec *E. cawoodi* Dreyer 1931, nec *E. capensis* Broom & Le Riche 1937, nec pars *E. capensis* Cooke 1939); *Equus kuhni* Broom = *E. cawoodi* van Hoepen 1930 = *E. louwi* van Hoepen 1930 = *E. capensis* Broom & Le Riche 1937; *Equus harrisi* Broom = *E. (Sterrohippus) harrisi* (pars) Haughton 1932 = *E. capensis* (pars) Cooke 1939, non *E. harrisi* Dreyer 1931; *Equus plicatus* (van Hoepen) = *Kolpohippus plicatus* van Hoepen 1930; *Equus fowleri* Wells; *Equus sandwithi* Haughton; *Equus poweri* Cooke; *Equus broomi* sp. nov. = *E. harrisi* (pars) Broom; *E. simplex* van Hoepen.

In the appendix:

Metaschizotherium transvaalensis George; *Equus zietsmani* Broom; *Equus kuhni* Broom = *E. fowleri*; *E. plicatus* = *E. harrisi* = *E. zietsmani*. Probably *E. grevyi* = *E. kuhni*.

[Figures of most of the type specimens and of several so-called "neotypes". The "neotypes" appear to have no taxonomic status.]

See also SHAW & COOKE; WELLS & COOKE.

COOKE, H. B. S., & CLARK, J. D., 1939. New fossil elephant remains from the Victoria Falls, Northern Rhodesia, and a preliminary note on the geology and archaeology of the deposit. *Trans. Roy. Soc. S. Afr.*, Cape Town, **27**: 287-320, 2 pls., 11 text-figs.

Palaeoloxodon darti sp. nov. Middle or Upper Pleistocene. [*Anthropologie*, **52**: 117-119.]

COOKE, H. B. S., & WELLS, L. H., 1946. The Power collection of mammalian remains from the Vaal River deposits at Pniel. *S. Afr. J. Sci.*, Johannesburg, **42**: 224-235, 1 fig.

Archidiskodon cf. *broomi* Osborn, *Palaeoloxodon* sp., *Equus poweri* Cooke, *E. capensis* Broom, *E. harrisi* Broom, *E. cf. kuhni* Broom, *E. cf. sandwithi* Haughton, *E. burchellii*

COOKE, H. B. S., & WELLS, L. H. (*contd.*)

Gray, *E. cf. quagga* Gmelin, *Taurotragus oryx* (Pallas), *Damaliscus cf. albifrons* (Burchell), *cf. Connochaetes* sp., *cf. Alcelaphus caama* (Cuvier), *cf. Peloroceras helmei* (Lyle), *Sylvicapra grimmia* (Linn.), *cf. Aepyceros melampus* (Lichtenstein), *Hippopotamus amphibius* Linn., *Phacochoerus africanus* (Gmelin), *P. cf. compactus* van Hoepen & van Hoepen, *P. altidens* Shaw & Cooke.

Middle Pleistocene: Pniel, Barkly West, Cape Province.

1947. Fossil Mammals from the Makapan valley, Potgietersrust. III. Giraffidae. *S. Afr. J. Sci.*, Johannesburg, **43**: 232–235, 1 fig.

Giraffa camelopardalis (Linnaeus), *Giriquatherium cingulatum* Houghton.
[Pleistocene.]

DALE, M. M., 1948. New fossil Suidae from the Limeworks Quarry, Makapansgat, Potgietersrust. *S. Afr. J. Sci.*, Johannesburg, **2**: 114–116, 2 figs.

Pronotochoerus shawi sp. nov., *Potamochoeroides hypsodon* gen. et sp. nov.
[Pleistocene.]

DALE, M. M. & TOBIANSKY, D., 1947. Fossil mammals from the Makapan Valley, Potgietersrust. II. Suidae. *S. Afr. J. Sci.*, Johannesburg, **43**: 304.

Brief record of two unnamed genera; one of the wart-hog group, the other related to *Potamochoerus*.

DALLONI, M., 1940. Notes sur la classification du pliocène supérieur et du quaternaire de l'Algérie. *Bull. Soc. Géogr. Oran*, **61**: 8–43.

VILLAFRANCHIAN.

1. *Mastodon cf. borsoni* Hays, *Elephas planifrons* Falconer, *Hippopotamus hipponensis* Gaudry, *Felis* sp., *Dorcas setifensis* Pomel, *Oreonagor tournoueri* Thomas, *Hipparion ambiguum* Pomel, *Equus stenonis* Cocchi (*E. robustus* Pomel), etc.
Saint-Arnaud.

2. *Elephas cf. atlanticus* Pomel, *Hippopotamus cf. sirensis* Pomel, *Gazella massasilia* Pomel, *Equus cf. mauritanicus* Pomel, *Rhinoceros mercki* Kaup.

Ravines in the Akboub chain.

R. bank of the Chélif, near confluence of the Mina, nr. Sidi-Brahim.

3. *Elephas meridionalis* Nesti, *Hippopotamus amphibius* L. var. *major*, etc.
Plateaux of Aïn-el-Bey and Mansourah.

4. *Hipparion* sp.
Guelma basin.

5. *Libytherium maurusium* Pomel.
Chaacha.

SICILIAN.

1. *Buffelus palaeindicus* Falconer.
Environs of Bizerta, Tunisia.

MILAZZIAN.

1. *Elephas atlanticus* Pomel.
Plain S. of Petit and Millesimo, nr. Guelma.

2. *Megaceroïdes algericus* Lydekker.
Hammam Meskoutine.

“Comme pour le Sicilien, ces vestiges de la faune de vertébrés milazziens sont . . . trop rares pour nous permettre de caractériser la période au point de vue paléontologique.”

TYRRHENIAN.

1. *Elephas atlanticus*, *Hippopotamus amphibius*.
Nr. Bizerta, Tunisia.

DALLONI, M. (*contd.*)

2. *Elephas atlanticus*, *Hippopotamus amphibius* (*major*), *Rhinoceros mercki*, *Equus mauritanicus* Pomel, *Hyaena spelaea*, *Camelus thomasi* Pomel.
Ternifine (Palikao), E. of Mascara.

3. *Elephas atlanticus*.

Upper valley of the Oued Cherf.

North African fauna distinguished from European of this stage by abundant antelopes, especially gazelles, presence of camels, giraffes, and buffaloes, and rarity of deer.

MONASTIRIAN.

1. *Elephas iolensis*, *Hippopotamus amphibius* (*H. icosiensis* Pomel), *Bubalus antiquus* Duv., *Rhinoceros mercki*, bovines, antelopes, etc.
Pointe-Pescade and Bains-Romains, nr. Algiers.

2. *Elephas iolensis*.

Between mouth of the Boudouaou and Cap Blanc.

FLANDRIAN.

Rhinoceros mercki, *Hippopotamus amphibius*, *Bubalus antiquus* are rare survivors from Quaternary proper into period of capsian and ibero-maurusian cultures. *Elephas africanus*, previously unknown, now becomes the only representative of its group.

DAMES, W., 1883. Ueber eine Tertiäre Wirbelthier Fauna von der westlichen Insel des Birket el Qurun in Fayum (Aegypten). *S. B. preuss. Akad. Wiss.*, Berlin, 1883: 129-153, 1 pl., 1 text-fig.

Brief descr. of "*Zeuglodon species major*" and "*Zeuglodon species minor*".

Lower Tertiary, but uncertain whether Eocene or Oligocene.

1894. Ueber Zeuglodonten aus Aegypten und die Beziehungen der Archaeoceten zu den übrigen Cetaceen. *Paläont. Abh.*, Jena, (N.F.) 1, 5: 1-36, 7 pls., 1 text-fig.

Zeuglodon osiris sp. nov.

Mokattam beds [Eocene]: Birket-el-Qurun, Fayûm.

DART, R. A., 1923. The Brain of the Zeuglodontidae (Cetacea). *Proc. zool. Soc. London*, 1923: 615-648, 21 figs.

Description of endocranial casts of *Zeuglodon osiris* Dames, *Z. elliotsmithii* sp. nov., *Z. intermedius* sp. nov., *Z. sensitivus* sp. nov.

[See also ANDREWS, 1923b.]

1925a. *Australopithecus africanus* [gen. et sp. nov.]: the man-ape of South Africa. *Nature*, London, 115: 195-199, 6 figs.

Taungs, 80 m. N. of Kimberley.

[*Anthropologie*, 35: 123-130.]

1925b. The Taungs skull. *Nature*, London, 116: 462.

Letter in reply to KEITH, 1925a, q.v.

1926. Taungs and its significance. *Nat. Hist. New York*, 26: 315-327, 11 figs.

Semi-popular account of *Australopithecus* compared with orang, gorilla, and chimpanzee.

1927. Mammoths and Man in the Transvaal. *Nature*, London, 120, Supplement: 41-48, 4 figs.

Archidiskodon transvaalensis sp. nov., *A. sheppardi* sp. nov.

Vaal River gravels: nr. Bloemhof, S.W. Transvaal.

DART, R. A. (*contd.*)

- 1929a. Mammoths and other fossil elephants of the Vaal and Limpopo watersheds. *S. Afr. J. Sci.*, Johannesburg, **26**: 698-731, 28 figs.

Archidiskodon transvaalensis Dart., *A. sheppardi* Dart.

Lowest terrace of the Vaal River: Bloemhof, Transvaal.

Archidiskodon subplanifrons Osborn, *A. broomi* Osborn, *A. vanalpheni* **sp. nov.**, *A. milletti* **sp. nov.**, *A. griqua* Haughton, *A. loxodontoides* **sp. nov.**

Middle terrace of the Vaal River (? Pliocene): Sydney-on-Vaal, Transvaal.

Archidiskodon andrewsi **sp. nov.**

Middle terrace of the Vaal River (? Pliocene): Gong-Gong, Transvaal.

Archidiskodon hanekomi **sp. nov.**

Old bed of the Vaal River (? Upper Pleistocene): Delport's Hope, Transvaal.

Archidiskodon yorki **sp. nov.**

Vaal River gravels (? Middle Pleistocene): Vanasswegenshoek, Bloemheuvel, nr. Christiania, Transvaal.

Pilgrimia yorki **sp. nov.**

Vaal River gravels, ? Pleistocene: Vanasswegenshoek, Orange Free State, below Christiania.

Pilgrimia wilmani **sp. nov.**

Vaal River gravels, ? Middle Pleistocene: between Vanasswegenshoek [Orange Free State] and Bloemsheuvel, Transvaal, below Christiania [Transvaal].

Pilgrimia kuhni **sp. nov.**

? river gravels, ? Pleistocene: Pniel Estate [between Kimberley and Barkly, on Vaal River].

Loxodonta prima **sp. nov.**

? Recent: bank of Rhenosterspruit tributary of Limpopo River, Nooitgedacht, Pilandsberg, Transvaal.

Loxodonta africana var. *obliqua* **var. nov.**

? Recent: Krantzklouf, Steelpoort River, tributary of Oliphants River, N.E. Transvaal.

- 1929b. A note on the Taungs skull. *S. Afr. J. Sci.*, Johannesburg, **26**: 648-658, 1 pl.

Addnl. descr. and discussion. "The Australopithecidae gave birth to the Hominidae . . ."

1934. The dentition of *Australopithecus africanus*. *Folia anat. japon.*, Tokyo, **12**: 207-221, 5 pls.

Brief description of teeth. Discussion of probable habits and relationships.

[*Anthropologie*, **45**: 212-213.]

1936. Fossil man and contemporary fauna in southern Africa. *XVI Internat. geol. Congr.*, U.S.A., Washington, **2**: 1249-1270.

General review of fossil faunas and their correlation with human cultures.

1940. The status of *Australopithecus*. *Amer. J. phys. Anthrop.*, Philadelphia, **26**: 167-186.

General discussion and review of literature. "Australopithecus had achieved human status . . . in many features . . . but he is not a man."

- 1948a. An *Australopithecus* from the Central Transvaal. *S. Afr. Sci.*, Johannesburg, **1**: 200-201.

Australopithecus prometheus compared with *Plesianthropus* and *Paranthropus*.

[Pleistocene]: Makapansgat, Potgietersrust, Transvaal.

[*A. prometheus* is here **sp. nov.**; published July 1948.]

DART, R. A. (*contd.*)

- 1948b. An adolescent prometean australopithecine mandible from Makapansgat. *S. Afr. Sci.*, Johannesburg, 2: 73-75, 4 figs.

Mandible, with eruption of permanent dentition not completed at death, referred to *Australopithecus prometheus*.

- 1948c. A (?) prometean *Australopithecus* from Makapansgat Valley. *Nature*, London, 162: 375-376, 1 fig. [publ. 4 Sept.].

Occipital bone of *A. prometheus* Dart.

- 1948d. The Makapansgat proto-human *Australopithecus prometheus*. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) 6: 259-283, 1 pl., 6 text-figs. [publ. Sept.].

Detailed description and discussion of an occiput and its endocranial cast.

Villafranchian (early Pleistocene): Makapansgat, 13 miles N.E. of Potgietersrust, Central Transvaal.

- 1948e. The adolescent mandible of *Australopithecus prometheus*. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) 6: 391-411, 2 pls., 4 text figs.

Detailed description. Creation of 4 genera for known australopithecines not justified.

- 1948f. The infancy of *Australopithecus*. *Roy. Soc. S. Afr., Spec. Publ.*, Robert Broom commem. vol.: 143-152, 5 figs.

Skull of infant *Australopithecus* compared with corresponding stage in gibbon, gorilla, chimpanzee, orang and Bushman.

- 1948g. The *Australopithecus* of Makapansgat. *Man*, London, 48: 144, 1 fig.

A. prometheus: brief description of occiput.

Makapansgat Lime Works, c. 13 miles N.E. of Potgietersrust, Transvaal.

- 1949a. The predatory implemental technique of *Australopithecus*. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) 7: 1-38, 5 pls.

Figs. and descr. of skulls and mandibles of baboons supposed to have been killed by *Australopithecus prometheus*. [*Anthropologie*, 55: 318-321.]

- 1949b. The cranio-facial fragment of *Australopithecus prometheus*. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) 7: 187-213, 1 pl., 7 text-figs.

Detailed descr. right half of facial skeleton with P³-M²: comparisons with *Plesianthropus*, *Paranthropus*, and *Australopithecus africanus*.

Single isolated dm₂ and M₃ descr. and figd.

[Pleistocene]: Makapansgat [nr. Potgietersrust, Transvaal].

- 1949c. The first pelvic bones of *Australopithecus prometheus*: preliminary notes. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) 7: 255-257, 2 figs.

Left ilium and right ischium more man-like than those of *Plesianthropus*.

[Pleistocene]: Makapansgat [nr. Potgietersrust, Transvaal].

- 1949d. Innominate fragments of *Australopithecus prometheus*. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) 7: 301-333, 1 pl., 7 text-figs.

Detailed descr. and discussion. "... the pelvis of *A. prometheus* is human, just as its dentition, and cranial poise are human."

- 1949e. A second adult palate of *Australopithecus prometheus*. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) 7: 335-338, 1 fig.

Descr. of right premaxillo-maxillary fragment.

[Pleistocene]: Makapansgat [nr. Potgietersrust, Transvaal].

DART, R. A. (*contd.*)

1949f. The bone-bludgeon hunting technique of *Australopithecus*. *S. Afr. Sci. Johannesburg*, **2**: 150–152, 2 figs.

Semi-popular summary.

1949g. Adventures with *Australopithecus*. *Rationalist Annual*, London, **1949**: 15–25.

Popular article on discovery and significance of *Australopithecus*, *Plesianthropus*, *Paranthropus*, *Parapapio broomi*, *P. africanus*, *P. izodi*. *Australopithecus prometheus* knew the use of fire.

DARTEVELLE, E., 1935. Les premiers restes de mammifères du tertiaire du Congo : la faune Miocène de Malembe. *C.R. Congr. Sci. Bruxelles*, **1935**, **1**: 715–720.

Cetacean?, Equine?, *Palaeochoerus* sp., pig indet., *Mastodon* sp., *Halitherium* sp.?

DE BEAUMAIS, A., & ROYER, P., 1926. Fouilles de l'Adrar Gueldaman. *Bull. Soc. préhist. Fr.*, Paris, **23**: 223–238.

[Not seen: *teste* ARAMBOURG, 1938a.]

DÉBRUGE, A., 1903 (1902). Fouille de la grotte "Ali Bacha". *C.R. Ass. franç. Av. Sci.*, Paris, **31**, **2**: 866–883, 10 figs.

Stratified deposits containing magdalenian, mousterian, and neolithic artefacts yielded: fox, jackal, dog, serval (*Felis libyca* Olivier), panther, hyaena, porcupine, gerbils, hare or rabbit, horse, ass, boar, gazelle, goat or sheep, ox (*Bos elaphus* [sic] *saldensis* Pomel), bubal, *Bos opisthonomus* Pomel.

1903. Compte rendu sur les fouilles de divers abris sous roche des Aiguades, Bougie (Algérie). *Rec. Not. Mém. Soc. archéol. Constantine*.

[Not seen: *teste* ROMER, 1928.]

1906 (1905). Compte rendu des fouilles faites en 1904 par M. A. Débruge. *Rec. Not. Mém. Soc. archéol. Constantine*, **39**: 57 + figs.

[Horse, great ox, deer, sheep or goat, boar, elephant, lion, jackal, porcupine. *Anthropologie*, **17**: 598–599.]

1906a. La station quaternaire Ali Bacha à Bougie. *Rec. Not. Mém. Soc. archéol. Constantine*, (4), **9** (40): 119.

[Not seen: *teste* ARAMBOURG, 1933c.]

1906b. La station quaternaire Ali Bacha à Bougie. *Congr. int. Anthropol. Arch. préhist.*, Monaco.

[Mammalian remains belong to living spp. *Anthropologie*, **17**: 124.]

1907 (1906). La station quaternaire Ali Bacha à Bougie. *Rec. Not. Mém. Soc. archéol. Constantine*.

[Not seen: *teste* ROMER, 1928; see also 1906a, 1906b.]

1909 (1908). La grotte des ours. *Rec. Not. Mém. Soc. archéol. Constantine*, **42**: 117–148.

[*Rhinoceros simus*, *Hippotigris burchelli*, *Sus scrofa*, deer, gazelles, hartebeeste, mouflon, two kinds of oxen, panther, hyaena, jackal, bear. *Anthropologie*, **21**: 198–199.]

1910 (1909). Fouille de la Grotte du Mouflon (Constantine). *C.R. Ass. franç. Av. Sci.*, Paris, **38**: 813–822, 7 figs.

Vernacular list of fauna. "Porc épic, zèbre, grand bœuf, sanglier, mouflon, gazelles (*G. atlantica* Bgt., *G. subkevela* Pomel, *G. crassicornis*), gnou, cerf, bosélaphe . . . qui paraîtrait bien se rapporter au *Boselaphus saldensis* Pomel, ours, hyène, chacal."

[Author specifies Roman, Punic, recent neolithic, and upper and lower paleolithic levels, but does not relate them to the fauna.]

DÉBRUGE, A. (*contd.*)

1911. Les escargotières-kjoekkenmoeddings de la région de Tébessa. *C.R. Congr. Préhist.*, Nîmes, 7: 190-200.

[Not seen: *teste* ROMER, 1928.]

1913 (1912). La station préhistorique de Djebel-Ouach (près Constantine). *Rec. Not. Mém. Soc. archéol. Constantine*.

[Not seen: *teste* ROMER, 1928.]

1921. Atelier mousterien de el Loubria et escargotière de Aïn Mouhaâd. *Rec. Not. Mém. Soc. archéol. Constantine*.

[Not seen: *teste* ROMER, 1928.]

1923. La grotte de Bou-Zabouin, près Aïn M'lila. *Rec. Not. Mém. Soc. archéol. Constantine*.

[Not seen: *teste* ROMER, 1928.]

1925. La grotte des Hyènes. *Mém. Soc. archéol. Constantine*, 60.

[Not seen; reference incomplete. "Une faune néolithique." *Bull. Soc. Géogr. Oran*, 46: 80.]

DÉBRUGE, A., & MERCIER, G., 1913 (1912). La station préhistorique de Mechta-Châteaudun. *Rec. Not. Mém. Soc. archéol. Constantine*.

[Not seen: *teste* ROMER, 1928.]

1914 (1913). L'escargotière de Mechta-el-Arbi près Châteaudun-du-Rhumel. *C.R. Ass. franç. Av. Sci.*, Paris, 42: 417-426, 7 figs.

Ammotragus cervia Pallas [sic! = *A. lervia*], *Bubalis boselaphus* Pallas, *Bos taurus* L. var. *primigenius* Rütim, *B. taurus* var. *ibericus* Sanson, *Erinaceus algirus* Duvernoy, *Felis ocreata* Gmelin, *Gazella dorcas* L., *Gazella* var. *kevella* Pallas [sic!], *Vulpes vulpes* L. var. *atlantica* Wagner [JOLEAUD det.].

[Late Pleistocene, associated with a pre-capsian flake culture.]

[See also MERCIER & DÉBRUGE, 1913.]

DEL PAN, J., 1918. Palaeogeografia de los mamiferos cuaternarios de Europa y Norte de Africa. *Junta para ampliacion de estudios e investigaciones científicas, Madrid*, 99 pp., 9 pls.

[Not seen: *teste* BLONDEL, 1941.]

DE MORGAN, J., CAPITAIN, G., & BOUDY, P., 1910. Étude sur les stations préhistoriques du Sud Tunisien. *Rev. Écol. Anthropol. Paris*, 20: 105-136, 206-221, 267-286, 333-347, 116 figs. 21: 217-228.

["Étude sur les stations préhistoriques du Sud-Tunisien (à Gafsa, Chabet, Rechada, Jeneyen, etc., Industrie chelléo-moustérienne. Description des gisements." *Anthropologie*, 21: 616.]

DEPÉRET, C., 1897. Découverte du *Mastodon angustidens* dans l'étage Cartennien de Kabylie. *Bull. Soc. géol. Fr.*, Paris, (3) 25: 518-521, 1 pl.

Mastodon angustidens mut. asc. *pygmaeus* nov.

Lower Miocene, Cartennian [= Burdigalian]: road between Chabet-el-Ameur and Isserville, Algeria.

[Publ. post Aug. 1897.]

1907. Sur l'âge des couches à Paléomastodon du Fayoum. *Bull. Soc. géol. Fr.*, Paris, (4) 7: 193-194.

Oligocene, either top of the Sannoisian or basal Stampian.

DEPÉRET, C. (*contd.*)

1908 (1907). Sur l'âge des couches à *Palaeomastodon* du Fayoum (2^e note). *Bull. Soc. géol. Fr.*, Paris, (4) 7: 455-456.

Additional arguments in favour of Oligocene (Sannoisian or Stampian) date.

1921. La phylogénie des Hippopotames. *C.R. Soc. géol. Fr.*, Paris, 1921: 163-165.

H. hipponensis Gaudry.

Pliocene: Bône [Algeria]; Wadi Natrun, Egypt.

DEPÉRET, C., LAUDAUDEN, L., & SOLIGNAC, M., 1925. Sur la découverte du *Mastodon arvernensis* dans le Pliocène de Ferryville (Tunisie). *C.R. Soc. géol. Fr.*, Paris, 1925: 21-22.

Preliminary description.

Pliocene, probably Astian: hills S. of Ferryville.

DEPÉRET, C., & MAYET, L., 1923. Les rameaux phylétiques des Eléphants. *C.R. Acad. sci. Paris*, 176: 1278-1281.

Systematic position of *Elephas atlanticus* Pomel. *E. iolensis* Pomel, *E. africanus* Linn.

DEPÉRET, C., MAYET, L., & ROMAN, F., 1923. Les éléphants Pliocènes. *Ann. Univ. Lyon*, (N.S.) 1, 42: 1-224, 11 pls., 33 text-figs.

Elephas africanus, phylogeny.

DEPÉRET, C., PASSEMARD, E., & ROCHETTE, J., 1928. Les vertébrés fossiles du Fort Bourdonneau à Fès (Maroc). *Bull. Soc. Hist. nat. Toulouse*, 57: 277-295, 4 pls., 1 text-fig.

Ursus arctos L. race *libycus* Pomel, *Felis leo* L. race *spelaea* Goldf., *Hyaena crocuta* Zimm. race *spelaea* Goldf., *Canis aureus* L., *Equus* sp. (small), *Rhinoceros mauritanicus* Pomel, *Bos opisthonomus* Pomel, *Gazella* aff. *dorcas* L., *G. crassicornis* Pomel, *Alcelaphus probubalis* Pomel sp.

"... sans âge précis dans la classification générale des étages quaternaires."

DERANIYAGALA, P. E. P., 1947. Some fossil animals from Ceylon. Pt. 5. *J. Ceylon Br. Asiat. Soc.*, Colombo, 37: 221-230, 1 pl., 2 text-figs.

Hippoleakius gen. nov. for *Hippopotamus gorgops* Dietr. Middle & (?) Upper Pleistocene: Tanganyika & East Africa. Also diagnoses of *Hippopotamus* Linné, 1758; *Choeropsis* Leidy, 1853.

1948. Some scientific results of two visits to Africa. *Spolia Zeylan.*, Colombo, 25, 2: 1-42, 14 pls., 2 text-figs.

Semi-popular. *Hippoleakius* [= *Hippopotamus*] *gorgops* (Dietr.), *H. kaisensis* (Hopw.), *Prechoeropsis pharaohensis* gen. et sp. nov., *Loxodonta africana pharaohensis* sub-sp. nov.

DEVILLERS, C., 1948. Les dépôts quaternaires de l'Erg Tihodaïne (Sahara Central). *C.R. Soc. géol. Fr.*, Paris, 1948: 189-191.

Elephas recki, *Hippopotamus* cf. *amphibius*, *Atelodus* cf. *simus*, *Phacochoerus*, *Equus* (zebrine group), *Alcelaphus bubalis*, *Connochaetes*, *Gazella dorcas*, *Oryx*, *Bos primigenius*, 2 canine spp.

Two moist periods (one associated with chelleo-acheulean cultures, the other with neolithic) separated by a long dry one.

DIETRICH, W. O., 1913. Zur Stammesgeschichte des afrikanischen Elefanten. *Z. indukt. Abstamm. Vererb. Lehre*, Berlin, 10: 49-73, 7 figs.

View that the African elephant evolved independently from an unknown U. Tertiary African mastodont worth considering. No direct ancestor known in U. Pliocene or L. Diluvium.

DIETRICH, W. O. (contd.)

1916. *Elephas antiquus recki* n.f. aus dem Diluvium Deutsch-Ostafrikas. I. Arch. Biontol., Berlin, 4: 1-80, 8 pls.

[Middle Pleistocene]: Oldoway.

1925. *Elephas antiquus recki* n.f. aus dem Diluvium Deutsch-Ostafrikas. II. Wiss. Ergebn. Oldoway-Exped. 1913, (N.F.) 2: 1-38, 3 pls., 6 text-figs.

Addnl. descr. and figs.

[See also 1916.]

1926. Fortschritte der Säugetierpaläontologie Afrikas. Forsch. Fortschr. dtsch. Wiss., Berlin, 2: 121-122, 1 fig.

Hippopotamus gorgops sp. nov., name and figure.

No formal diagnosis, but characters of orbit mentioned as the distinguishing features.

"Jungdiluvial": Oldoway, Serengeti.

[Publ. 1 August 1926. Should they prove to be synonyms, this name has priority over *H. amphibius kaisensis* Hopw., November 1926.]

1927. *Brancatherulum* n.g. ein Proplacentalier aus dem obersten Jura des Tendaguru in Deutsch-Ostafrika. Cbl. Min. Geol. Paläont., Stuttgart, 1927 B: 423-426, 1 fig.

Brancatherulum tendaguruense gen. et sp. nov.

1928. Pleistocene deutschostafrikanische Hippopotamus-Reste. Wiss. Ergebn. Oldoway-Exped. 1913, (N.F.) 3: 3-41, 2 pls., 2 text-figs.

Hippopotamus gorgops.

[Stated to be sp. nov., but see 1926.]

1933. Zur Altersfrage der Oldowaylagerstätte. Cbl. Min. Geol. Paläont., Stuttgart, 1933 B: 229-304.

Bed 5 = Upper Pleistocene.

Beds 2-4 = Middle Pleistocene.

Bed 1 = Lower Pleistocene.

- 1937a. Pleistocene Suiden-Reste aus Oldoway, Deutsch-Ostafrika. Wiss. Ergebn. Oldoway-Exped. 1913, (N.F.) 4: 91-104, 2 pls., 3 text-figs.

Phacochoerus Cuvier, *Notochoerus* Broom-Metridiochoerus Hopwood, *Koiropotamus* Gray. [Anthropologie, 48: 325.]

- 1937b. Pleistocene Giraffinen und Bovinen aus Oldoway, Deutsch-Ostafrika. Wiss. Ergebn. Oldoway-Exped. 1913, (N.F.) 4: 105-110, 1 pl., 2 text-figs.

"*Sivatherium*" *olduvaiensis* (Hopwood), *Giraffa* sp., *Bubulus* sp.

Older Pleistocene.

[Anthropologie, 48: 325.]

1939. Zur Stratigraphie der Afrikanthropus fauna. Cbl. Min. Geol. Paläont., Stuttgart, 1939 B: 1-9, 1 fig.

Preliminary faunal list and discussion of age.

Papio sp. cf. *neumannii* Matschie, *Cercocebus* sp., *Mungos* cf. *sanguineus* Rüpp., *Thos.* sp., *Crocota crocota* (Erxl.) subsp. cf. *fisi* Heller, *Panthera leo* L. subsp. *spelaea* Gf., *Panthera pardus* L., *Orycteropus* cf. *aethiopicus* Sundevall, *Hystrix* sp., *Pedetes* sp. cf. *surdaster* Thomas, *Loxodonta* sp. cf. *africana* L., *Hipparion* sp. (not *Stylohipparion*), *Equus quagga* subsp. cf. *böhmi*, *Diceros bicornis* L., *Ceratotherium simum* Burch. subsp. cf. *germano-africanus* Hilzheimer, *Phacochoerus aethiopicus* L., *Sus* sp., *Koiropotamus* sp., *Hippopotamus amphibius* L., *Giraffa* sp., *Giraffa* sp. cf. *camelopardalis*, *Cephalophus* sp., *Tragelaphus strepsiceros*, *Taurotragus oryx* Pall. subsp. cf. *pachyceros* Schwarz, *Bubalus* sp. cf. *caffer* Gray?, *Kobus ellipsiprymnus* Og., *Kobus* sp. cf. *Adenota kob* Erxl., *Redunca redunca* Pall.

DIETRICH, W. O. (*contd.*)

subsp., *Aepyceros suara* Matschie, *Aepyceros* or *Beatragus* (*Damaliscus*), *Alcelaphus* (?) sp., *Gazella* sp. cf. *granti* Brooke, *Gorgon taurinus* Burch., *Hippotragus equinus* subsp., *Oryx beisa* Rüpp.

Post-Kamasian interpluvial (approximately equivalent to Riss-Würm interglacial); Lake Eyasi, Tanganyika Territory.

[See also 1941, 1942a.]

1941. Die säugetierpaläontologische Ergebnisse der Kohl-Larsen'schen Expedition, 1937–1939 im nördlichen Deutsch-Ostafrika. *Cbl. Min. Geol. Paläont.*, Stuttgart, 1941 B: 217–223.

Preliminary account of fauna with new names as follows—*Archidiskodon exoptatus* sp. nov., *Hypsohipparion* gen. nov. for *Hipparion albertense* Hopw., *Metaschizotherium hennigi* sp. nov. [nom. nud.], *Okapia stillei* sp. nov., *Simatherium kohllarseni* gen. et sp. nov., *Serengetilagus praecapensis* gen. et sp. nov. [nom. nud.], *Xerus janenschii* sp. nov. [nom. nud.], *Heterocephalus quenstedti* sp. nov. [nom. nud.], *Mungos palaeoserengetensis* sp. nov. [nom. nud.], *M. palaeogracilis* sp. nov. [nom. nud.].

Lowest Quaternary: Vogel River area, Tanganyika Territory.

[See 1942a for descr. and figs.]

- 1942a. Ältestquartäre Säugetiere aus der südlichen Serengeti, Deutsch-Ostafrika. *Paläontographica*, Stuttgart, 94, A: 43–133, 21 pls., 2 maps in text.

Descr. and figs. of—*Papio* (*Simopithecus*) *serengetensis* sp. nov., *Orycteropus* sp. cf. *aethiopicus* Sundevall [not fig.], *Serengetilagus praecapensis* gen. et sp. nov., *Xerus janenschii* sp. nov., *Pedetes surdaster* Thos. subsp., *Tachyoryctes splendens* Rüpp. subsp. [not fig.], *Dendromus* sp., *Saccostomus* sp., *Colomys* sp. [not fig.], *Tatera nigricauda* Peters subsp., *Hystrix galeata* Thos. subsp., *Heterocephalus quenstedti* sp. nov., *Canis* (*Lupulella*) sp. [not fig.], *C.* (*Lupulella*) *mesomelas* subsp. [not fig.], *Canis* sp. cf. *africanus* Pohle [not fig.], *Mungos palaeoserengetensis* sp. nov., *Mungos palaeogracilis* sp. nov. [not fig.], *Hyaena hyaena* subsp. [not fig.], *Crocotta crocuta* subsp. [not fig.], *Panthera pardus* subsp. [not fig.], *Leo* sp. [not fig.], *Lynx* sp. cf. *caracal* G黦ldenst. [not fig.], *Archidiskodon exoptatus* [Dietr., 1941, q.v.], *Loxodonta africana* subsp., *Dinotherium giganteum* var. *bozasi* Aramb. n. var., *Hypsohipparion albertense* (Hopwood), *Equus quagga* subsp. cf. *boehmi* Matschie, *Metaschizotherium hennigi* sp. nov., *Hylochoerus euilus* Hopwood, *Potamochoerus* cf. *major* Hopwood, *Sus* cf. *falconeri* Lydekker [not fig.], *Phacochoerus africanus* subsp., *Notochoerus serengetensis* sp. nov., *Giraffa camelopardalis* subsp., *Okapia stillei* sp. nov., “*Sivatherium*” *olduvaiense* (Hopwood), *Tragelaphus* sp. cf. *buxtoni* Lydekker, *Simatherium kohllarseni* sp. nov.

Author equates with the “Oberpliozän, Präglazial” of Europe; more precisely, equivalent to English Red Crag and Indian Pinjor, i.e., between Astian and Villafranchian: Vogel River area, N.W. of Lake Eyasi, Tanganyika Territory.

[See also 1941.]

- 1942b. Zur Entwicklungsmechanik des Gebisses der afrikanischen Nashörner. *Cbl. Geol. Min. Paläont.*, Stuttgart, 1942 B: 297–300, 3 figs.

Serengeticeros efficax gen. et sp. nov. directly ancestral to *Ceratotherium simum* but with many dental resemblances to *Diceros bicornis*.

“Serengeti-Stufe Deutsch-Ostafrikas.”

Dicerinae, Ceratotheriinae subf. nov. separated in the Miocene at least.

1943. Ueber innerafrikanische Mastodonten. *Z. dtsh. geol. Ges.*, Berlin, 95: 46–48, 4 figs.

Anancus arvernensis sub-sp., dP², dP₂, M¹, M², descr. and figs.

“Ältestquartär der südlichen Serengeti.”

[See also 1941, 1942a.]

DIETRICH, W. O. (*contd.*)

1945. Nashornreste aus dem Quartär Deutsch-Ostafrikas, *Paläontographica*, Stuttgart, 96, A: 46-90, 7 pls., 1 text-fig.

Serengeticerus efficax Dietrich 1942.

Oldest Quaternary: Vogel River area, southern Serengeti [Tanganyika Territory].

Ceratotherium simum sub-sp.

Middle or Young Quaternary: Vogel River area.

Ceratotherium simum sub-sp.

Young Quaternary: "Njarasa-See [Lake Eyasi], Nordost und West Bucht" [Tanganyika Territory].

Diceros bicornis sub-sp.

Young Quaternary: "Njarasa-See".

Diceros bicornis holmwoodi (Sclater).

Recent.

Some limb-bones of *Serengeticerus* and *Diceros* descr. and figd.

- 1949 (1948). Zum fossilen Vorkommen der Rohrratte *Thryonomys swinderianus* (Temminck 1827). *Monatsh. n. Jahrb. Min. Geol. Paläont.*, Stuttgart, 1945-48 B, 5-8: 236-239, 1 fig.

Quaternary: "Westbucht am Nordostende des Njarasasees" [Tanganyika Territory].

1950. Fossile Antilopen und Rinder Äquatorialafrikas. (Material der Kohl-Larsen'schen Expeditionen). *Paläontographica*, Stuttgart, 99, A: 1-62, 6 pls., sketch-map in text.

1. *Gazella hennigi* sp. nov., *G. janenschi* sp. nov., *G. kohllarseni* sp. nov., aepycerotine indet., *Praedamalis deturi* gen. et sp. nov., *Parestigorgon gadjingeri* gen. et sp. nov., *Praemadoqua avifluminis* gen. et sp. nov., reduncine indet., *Aeotragus garussi* gen. et sp. nov., *Hippotragus*? sp., *Tragelaphus* sp. cf. *buxtoni*, *Taurotragus* sp. cf. *gaudryi*, *Simatherium kohllarseni*.

Serengeti stage (Oldest Quaternary): S. Serengeti, Tanganyika Territory.

2. *Cephalophus* sp.?, *Gazella granti* subsp., *G. thomsoni* (?), *Aepyceros melampus* subsp., *Connochaetes* sp., *C. taurinus major* subsp. nov., cf. *Damaliscus* sp., *Redunca redunca* subsp., *Adenota kob* subsp., *Kobus ellipsiprymnus* subsp., *Hippotragus* sp., *H. equinus* subsp., *Oryx beisa* subsp., *Strepsiceros strepsiceros* subsp., *Taurotragus oryx* cf. *pachyceros*, *Bubalus* cf. *antiquus*, *Buffelus* cf. *palaeindicus*, *Syncerus caffer* sub-sp.

Younger deposits of the Serengeti Steppe, Lake Eyasi deposits (Middle to Late Quaternary).

3. *Gazella thomsoni*, *Alcelaphus* sp., *Connochaetes taurinus*, *Damaliscus* sp., *Redunca* sp., *Kobus* sp., *Hippotragus* sp., *Tragelaphus* sp., *Taurotragus oryx* subsp., *Bubalus* sp.

Latest Quaternary: Lemagrut Korongo, S. Serengeti (probably equivalent to Olduvai, Bed V).

4. *Philantomba monticola* subsp. Schw., *Gazella gazella praecursor* Schw., *G. granti* subsp., *Phenacotragus recki* (Schw.), *Alcelaphus kattwinkeli* Schw., *Thaleroceros radiciformis* Reck (*Thaleroceros* Reck 1935 = *Alcelaphus* Blainville 1816), *Damaliscus angusticornis* Schw., *Beatragus hunteri* subsp., *Connochaetes taurinus semiticus* Schw. [= *Rhynotragus semiticus* Reck, 1935.], *Parmularius altidens* Hopw., ? *Nesotragus moschatus* subsp., *Hippotragus leucophaeus* Pall., *H. niro* Hopw., *Tragelaphus scriptus* subsp., *T. spekei stromeri* Schw., *T. buxtoni* (n. Hopw.), *Strepsiceros strepsiceros* subsp., *Taurotragus oryx pachyceros* Schw., *Pelorovis oldowayensis* Reck, *Pultiphagonides africanus* Hopw., *Bularchos arok* Hopw.

Lower-Upper Quaternary: Olduvai.

[Author gives a systematic arrangement of the African Bovidae and states the type-species of each genus: many Asiatic and some European genera included but the type-species is occasionally omitted.]

See also RECK & DIETRICH.

DIXEY, F., 1944. Miocene sediments in South Turkana. *J. E. Afr. Uganda nat. Hist. Soc.*, Nairobi, **18**: 13-14.

Mammalian remains include *Dinotherium hobleyi*.

6 miles S. of Loperot ridge, which lies c. 60 miles S.S.E. of Lodwar, Kenya Colony.

DOUMERGUE, F., 1893 (1892). La Grotte du Ciel ouvert, à Oran. *C.R. Ass. franç. Av. Sci.*, Paris, **1892**: 623-628.

Preliminary faunal list, viz. Dorcas gazelle, antelope, *Bos* in lowest layer.

Antilope nov. sed non descript., *A. maupasi* Pomel, dog in middle layer.

Bos primigenius var. *mauretanicus* Thomas, *Equus* sp., wild boar, porcupine, mountain gazelle, hedgehog [horizon not stated; apparently the middle layer].

Sheep and goat in middle layer: rare at first becoming more frequent later and abundant in the modern layer. [*Anthropologie*, **4**: 468-469.]

1907. La grotte préhistorique de la Forêt à Oran. *Bull. Soc. Géogr. Oran*, **27**: 391-398.

Sus barbarus Pomel, *Bos opisthonomus* Pomel, *B. ibericus* Sanson (var.?), *Ovis africana* Sanson (var.?), *Dorcas oranensis* Pomel, *D. subgazella* Pomel?, *Antilope* cf. *leporina* Pomel?.

Associated with neolithic artefacts.

1910. Contributions au préhistorique de la province d'Oran. *Bull. Soc. Géogr. Oran*, **30**: 409-428, 2 figs.

Gazella sp., *Antilope bubalis* Pallas, *Alcelaphus probubalis* Pomel, *Bos opisthonomus* Pomel. Associated culture described but not classified [neolithic?]: Saint Louis (Buttes de Bou-Fatis), arrondissement d'Oran, Algeria. [*Anthropologie*, **22**: 317.]

1913. Note sur quelques relations de la préhistoire de la région de Constantine avec celle des environs d'Oran. *Bull. Soc. Géogr. Oran*, **33**: 499-506.

Critical discussion of DÉBRUGE & MERCIER, 1913 (1912), q.v.

Fauna quoted as *Bubalus boselaphus* Pallas, *Bos taurus* L. var. *primigenius* Rütim., *B. taurus* var. *ibericus* Sanson, *Erinaceus algirus* Duvernoy, *Felis ocreata* Gmelin, *Gazella dorcas* L., *Gazella* var. *kevella* Pallas [sic], *Vulpes vulpes* L. var. *atlantica* Wagn., *Ammotragus cervia* [err. pro *lervia*] Pall.

[Late Pleistocene]: Mechta-Châteaudun (Mechta-el-Arbi).

1919. Contributions au préhistorique de la province d'Oran. *Bull. Soc. Géogr. Oran*, **39**: 49-86, 13 figs.

Bos opisthonomus Pomel, *Antilope bubalis* Pallas. Aïn Beïda (de la M'leta). Hamlet in the commune of Hammam bou Hadjar, 7 km. S. of Er-Rahel, arrondissement of Oran.

Bos opisthonomus abundant in the region of Er-Rahel.

Bos opisthonomus Pomel, *Alcelaphus bubalis* Pallas. Trois Marabouts (Sidi Yamine, valley of Oued Senane, 5 km. N.E. of Aïn Témouchent), arrondissement of Oran.

1921a. Le "Cimetière des Escargots" foyer littoral préhistorique de Coraless. *Bull. Soc. Géogr. Oran*, **41**: 45-55, 1 pl.

Alcelaphus bubalis Pallas, *Gazella kevella* Gmel., sheep.

Associated with neolithic culture: commune of Bou Sfer, near to and S. of Point Coraless, Oran, Algeria.

1921b. Inventaire des grottes préhistoriques des environs d'Oran. *Bull. Soc. Géogr. Oran*, **41**: 105-127, map.

No faunal lists: references to literature and to collections in Museums of Oran, Algiers, Lyons.

DOUMERGUE, F. (*contd.*)

2. Grey (middle) layer.

Sus mauritanicus Pom., *Equus asinus africanus* Sanson, [*Bos opisthonomus*, *Alcelaphus bubalis*, *Ovis tragelaphus*, in vernacular], *Gazella rufifrons* Gray var. *rufina* Thomas = *G. pallaryi* Pomel, *Felis pardus* L. [lower canine brought in from elsewhere?].

Apparently contemporary with open-air hearths containing older neolithic cultures without pottery or polished tools.

3. Black (top) layer.

Sus scrofa L., *Bos opisthonomus* Pomel, *Buselaphus* [= *Alcelaphus* supra] *bubalis* Pallas, *Oryx troglodytorum*, antelope indet., *Nagor maupassi* Pomel, *Gazella cuvieri* Ogilby = *G. kevella* auct., *Ovis tragelaphus* Desm., sheep, porcupine, hedgehog, hare, rabbit, panther, fox, jackal, lynx, mongoose, genet.

Associated culture clearly neolithic.

[*Anthropologie*, 38: 585-587.]

1928. Découverte de l'*Elephas planifrons* Falconer à Rachgoun (Dépt. d'Oran). *Bull. Cinquant. Soc. Géogr. Oran*, 114-132, 4 figs.

Detailed description: details of geology.

Villafranchian.

1934. Grotte et brèche ossifères de Saint-Roch-sur-Mer (Aïn-el-Turck). *Bull. Soc. Géogr. Oran*, 56: 309-347, 8 figs.

Hyaena crocuta Erxleb., *subspelaea*; *H. striata* Zimm.; *Rhinoceros subinermis* Pomel; *Equus mauritanicus* Pomel; *Equus asinus africanus* Sanson; *Sus algeriensis* Pomel (or new sp. ?); *Hippopotamus sirensis* Pomel; *Bos opisthonomus* Pomel; *Bos* sp. ?; *Bubalus antiquus* Duvernoy; *Ovis palaeotragus* Pomel; *Camelopardus* sp. ? [sic.]; *Hippotragus equinus* Is. Geoffroy; *Gazella* sp.; *Alcelaphus probubalis* Pomel; *Camelus* sp.

Author equates the deposit with that of Kharouba and refers the artifacts to one of the last phases in the evolution of the mousterian industry.

[*Anthropologie*, 45: 638.]

1935. Grotte (démantelée) des carrières d'Eckmühl. *Bull. Soc. Géogr. Oran*, 56: 258-304, 5 pls.

Partly descriptive, partly critical of PALLARY, 1934, q.v.

Equus mauritanicus Pom.; *E. asinus africanus* Sans.; *Bos opisthonomus* Pom.; *Ovis tragelaphus* Desm. (= *Tragelaphus lervia* Ogilby); *Alcelaphus bubalis* Pallas; *Dorcas oranensis* Pom.; *Gazella kevella* L. (= *G. cuvieri* Ogilby).

Associated with an ibero-maurusian culture.

[*Anthropologie*, 46: 662-663.]

- DOUMERGUE, F., & POIRIER, —, 1894. La Grotte préhistorique de l'Oued Saïda. *Bull. Soc. Géogr. Oran*, 14: 105-127, 3 pls.

Erinaceus algirus Duv.; *Canis aureus* L. at all levels; *C. niloticus* Geoff. Saint-Hil.; dog—level unknown; *Hyaena hyaena* L.; *Felis leo* L.; *F. caracal* L.; *F. serval* L.; *Herpestes ichneumon* L.; *Gerbillus shawi* Rozet; *G. selysii* Pomel = *G. hirtipes* Lat.; *Hystrix cristata* L.; *Lepus cuniculus* L.; *L. aegyptius* Desm.; *Equus caballus* L.; *E. asinus* L.; [Authors question age of these two spp.; we suggest the records are doubtful. Is it certain that neither is a zebra?]; *Sus scrofa* L.; camel or dromedary; sheep or goat, neither appears to be very old; *Ovis tragelaphus* Desm.; *Bos opisthonomus* Pomel; *B. curvidens* Pomel; small ox near recent race; the recent ox of the district; *Bubalus antiquus* Duv.; *Antilope bubalis* Pallas = *Alcelaphus bubalus* de Blainv., *Antilope maupasi* Pomel; *Gazella dorcas* Pallas? Quaternary and post-Quaternary.

[Stratigraphy of deposit conjectural. The cave was emptied by its inhabitants more than once.]

- DRESCH, J., 1935. Bibliographie des travaux de géologie et géographie physique parus sur le Maroc en 1934. *Rev. Géogr. maroc.*, Casablanca, 19: 309-324.

One or two titles of contingent value.

DREYER, T. F., & LYLE, A., 1931. *New fossil mammals and man from South Africa*. 60 pp., 12 pls., Dept. Zoology, Grey University College, Bloemfontein.

Phacochoerus helmei sp. nov., *P. venteri* sp. nov., *P. meiringi* sp. nov., *Hippopotamus westphali* sp. nov., *H. helmei* sp. nov., *H. venteri* sp. nov., *Equus harrisi* Broom, *E. kuhni simplex* var. nov., *E. cawoodi* Broom, *E. lylei* sp. nov., *E. helmei* sp. nov., *E. quagga quagga* (nr. *Kolpohippus plicatus* van Hoepen), *E. capensis* Broom, *E. westphali* sp. nov., *Bubalis helmei* sp. nov., *Bubalus baini*, *Taurotragus oryx*, *Strepsiceros kudu*, *Hippotragus* sp., *Cobus venteri* Broom, *Connochaetes antiquus* Broom, *Tragelaphus* sp., *Cephalophus* sp., *Damaliscus albifrons*, *Aonyx robustus* sp. nov., *Atilax paludinosus*?, *Hyaena brunnea*, *Calogale cauxi*, *Pedetes hagenstadi* sp. nov., *Myotomys* nr. *turneri*, *M.* nr. *unisulcatus*, *Otomys* nr. *irroratus*, *Gerbilline* sp., *Phacochoerus dreyeri* sp. nov.

Pleistocene: various localities.

[A confusing, badly arranged publication. The faunal lists for several localities, with the authorship of the new spp., follow.

FLORIS BAD. *Phacochoerus helmei* Dreyer & Lyle, *P. venteri* Dreyer & Lyle, *Hippopotamus helmei* Lyle, *H. cf. amphibius*, *Equus lylei* Dreyer, *E. helmei* Dreyer, *E. quagga quagga*, *Bubalus baini*, *Bubalis helmei* Lyle, *Taurotragus oryx*, *Strepsiceros kudu*, *Hippotragus* sp., *Cobus venteri* Broom, *Connochaetes antiquus*, *Tragelaphus* sp., *Cephalophus* sp., *Damaliscus albifrons*, *Aonyx robustus* Lyle, *Atilax paludinosus*, *Hyaena brunnea*, *Calogale cauxi*, *Pedetes hagenstadi* Lyle, *Myotomys* nr. *turneri*, *M.* nr. *unisulcatus*, *Otomys* nr. *irroratus*, gerbille.

RIET RIVER, nr. EDENBURG, O.F.S. *Phacochoerus meiringi* Dreyer & Lyle.

LITTLE BRAK RIVER, MR. E. ROBERTSON'S FARM. *Phacochoerus dreyeri* Dreyer & Lyle.

PNIEL. *Hippopotamus westphali* Lyle, *Equus harrisi*, *E. kuhni simplex* Dreyer, *E. cawoodi*.]

DUCELLIER, L. See ARAMBOURG & DUCELLIER.

DUCKWORTH, W. L. H., 1925. The fossil anthropoid ape from Taungs. *Nature, London*, **115**: 236.

[One of a series of notes by various authors under the single general title.

See also KEITH 1925a, SMITH, G. E. 1925, WOODWARD 1925.]

DUERST, J. U., 1900. Notes sur quelques bovidés préhistoriques. *Anthropologie, Paris*, **10**: 655-676, 19 figs.; **11**: 129-158, 16 figs.

Bubalus antiquus Duvernoy = *B. palaeindicus* Falconer, *Bos primigenius mauritanicus* Thomas and *B. opisthonomus* Pomel identical with *B. primigenius* Boj.

DUVERNOY, G. L., 1851. Note sur une espèce de buffle fossile (*Bubalis (Arni) antiquus*), découverte en Algérie, caractérisée et décrite par M. Duvernoy. *C.R. Acad. Sci. Paris*, **33**: 595-597.

Bubalus (Arni) antiquus sp. nov.; descr., no figs.

"Terrain diluvien": "Tout près de Sétif".

EDINGER, T., 1933. Ueber Gehirne tertiärer Sirenia Aegyptens und Mitteleuropas sowie der rezenten Seekühe. *Abh. bayer. Akad. Wiss., München*, (N.F.) **20**: 1-36, 3 pls., 11 text-figs.

Protosiren fraasi Abel.

Middle Eocene (Mokattam beds): near Cairo.

Eosiren libyca Andrews.

Upper Eocene (Qasr-es-Sagha Beds): near Cairo.

Discussion of gross anatomy of the brains of recent and fossil Sirenia, and its bearing on the ecology and phylogeny of the group.

1938. Mitteilungen über Wirbeltierreste aus dem Mittelpliocän des Natrontales (Ägypten). 9. Das Gehirn des *Libypithecus*. *Cbl. Min. Geol. Paläont., Stuttgart*, 1938 **B**: 122-128, 5 figs.

Libypithecus markgrafi Stromer, new fig. of skull; endocranial cast, descr. and figs.

Fluvio-marine Middle Pliocene: Wadi Natrun, Egypt.

EDINGER, T. (*contd.*)

1939. Two notes on the central nervous system of fossil Sirenia. 1. A newly discovered "brain" of an old *Protosiren*. 2. On the spinal cord of fossil Sirenia. *Bull. Fac. Sci. Fouad I Univ.*, Cairo, 19: 41-57, 3 pls.

1. Natural endocast, descr. and fig.

Lutetian: Gebel Moqattam.

2. Characters of the neural canal in Recent and fossil Sirenia, incl. *Eotherium* (*Eosiren*) *libycum*, *Eotherium aegyptiacum*, *Protosiren fraasi*.

EDWARDS, H. MILNE, 1837. Note sur une brèche osseuse située entre Oran et Mers-el-Kebir. *Ann. Sci. nat.*, Paris, (2) 7: 216-219.

Skull fragment of a probable new species of bear associated with ox and other ruminants and horse.

EHRMANN, F., 1920a. Le Quaternaire des grottes de Ziana. *Bull. Soc. Hist. nat. Afr. N.*, Alger, 11: 119-120.

Rhinoceros, antelopes, and smaller mammals.

[Preliminary note, no details. Gulf of Bougie.]

1920b. L'*Elephas africanus* à Beni-Saf (Oranie). *Bull. Soc. Hist. nat. Afr. N.*, Alger, 11: 139-140, 1 fig.

Molar tooth descr. and fig.

"Quaternaire récent".

This species lived in Algeria from towards the end of the Quaternary to a period well before the Roman occupation.

ELLERMAN, J. R., & MORRISON-SCOTT, T. C. S., 1951. *Checklist of Palaearctic and Indian mammals 1758 to 1946*. 810 pp., folding map, British Museum (Natural History), London.

Recent spp. only: the source from which much of the synonymy in the Systematic Index was taken.

ENDERS, R. K., 1927. A small collection of mammalian remains secured by the University of Michigan Egyptian Expedition. *Pap. Mich. Acad. Sci.*, Ann Arbor, 7: 293-298, map.

Recent and domestic spp. of third century B.C. to fifth century A.D.

ENNOUCHI, E., 1948a. Les vertébrés du Quaternaire de Rabat (Maroc). *C.R. Soc. géol. Fr.*, Paris, 1948: 251-253.

Following spp. distributed among four horizons A, B, C, D.

Elephas atlanticus mut. *maroccanus*, *Rhinoceros simus*, *R. mercki*, *Equus mauritanicus*, *Equus* sp., *Hippopotamus amphibius*, *Sus* sp., *Phacochoerus africanus*, *Bos primigenius*, *Bubalus antiquus*, *Connochaetes taurinus prognus*, *Alcelaphus bubalis*, *Redunca maupasi*, *Cervus* sp., *Oryx* sp., *Gazella atlantica*, *G. dorcas*, *G. cuvieri*, *Ovis* sp., *Hyaena* sp., *Felis* sp., *Canis anthus*, *Canis* sp., *Hystrix* sp.

Apart from the elephant, sheep, and undetermined horse, all these are recorded from the main horizon, C, and the majority from more than one of the remainder. Lowest bed, A, contains a micoquian industry.

1948b. Sur la présence de *Rhinoceros simus* dans le Sud marocain. *C.R. Soc. géol. Fr.*, Paris, 1948: 289-291.

Between Safi and Mogador, on the bank of Oued Tensift, above village of Talmeste.

ENNOUCHI, E. (*contd.*)

1949a. Sur la présence de trois espèces de mastodontes au Maroc. *Bull. Soc. Sci. nat. Maroc.*, Rabat, 25-27: 49-51.

1. *Trilophodon* (*Mastodon*) aff. *angustidens* Cuvier.

Tortonian: mines of Gara-Ziad (Taourirt region).

2. *Tetralophodon* (*Mastodon*) aff. *longirostris* Kaup.

Pontian: right bank of Oum er Rebia, upstream from the Beni Amir and below Zidania.

3. *Anancus* (*Mastodon*) *arvernensis* Croizet & Jobert.

Upper Pliocene: edge of the Oued Fouarat, near Port Lyautey.

[A single volume covering the years 1945, 46, 47, with continuous pagination, publ. Febr. 1949. The "*Comptes Rendus*", from which this paper is sometimes quoted, are on pp. 1-121 of the "*Bulletin*".]

1949b. Répartition paléogéographique des proboscidiens et des rhinocéridés au Maroc. *XIII Congr. intern. Zool.*, Paris, pp. 559-560.

1. *Trilophodon* aff. *angustidens*.

Fullers earth of Gara-Ziad, nr. Camp Berteaux (Taourirt).

2. *Tetralophodon* aff. *longirostris*.

Pontian: Zidania (Kasba-Tadla).

3. *Anancus osiris*.

Villafranchian: Aïn-el-Arris (Port Lyautey).

4. *Elephas meridionalis*.

Villafranchian: Aïn-el-Arris and Aïn-es-Sebaa (Port Lyautey).

5. *E. recki*.

Basal Quaternary: Fougérolles (Rabat).

6. *E. atlanticus* mut. *maroccanus*.

Lower and middle palaeolithic: Banassa (N. of Port Lyautey).

Dune sandstones: Rabat, Tit-Mellil (Casablanca), Aïn Seba (Casablanca), Aïn Rohr (N. of Safi).

7. *E. mnaidriensis*.

Same horizon: cliff at Tangier.

8. *E. iolensis*.

Same horizon: Palmier quarry (Casablanca).

9. *E. africanus*.

[First found with upper palaeolithic cultures, develops in neolithic]; widespread in alluvium and beach deposits: Rabat, Port-Lyautey, Casablanca, Mazagan, Fez, Meknes.

10. *Rhinoceros simus*.

[Associated with cultures from lower palaeolithic to neolithic]: Rabat, Casablanca, Tit-Mellil, Fort Bourdonneau at Fez, Khemisset and Talmeste on Oued Tensift.

11. *R. (Coelodonta) mercki*.

[Associated with middle and upper palaeolithic cultures]; Kifan el Ghomari (Taza), El Khenzira (Mazagan), Rabat.

1949c. Le gisement de vertébrés pléistocènes d'Aïn Rorh. *C.R. Soc. géol. Fr.*, Paris, 1949: 111-112.

Elephas atlanticus mut. *maroccanus*, *Rhinoceros simus*, *Equus mauritanicus*, *Hippopotamus amphibius*, *Alcelaphus bubalis*, *Bos primigenius*, rodent.

Between Mazagan and Safi, 15 km. E. of Oualidia beach, Morocco.

ENNOUCHI, E. (*contd.*)

1949d. Une deuxième faune pléistocène à Aïn-Rohr (Maroc.). *C.R. Soc. géol. Fr.*, Paris, 1949: 237-238.

Equus mauritanicus, *Bos primigenius*, *Connchoetes taurinus prognu*, *Alcelaphus bubalis*, *Gazella dorcas*.

2 km. E. of locality given in 1949c, q.v.

1949e. Découvertes de deux cornes de *Bos primigenius*. *C.R. Soc. géol. Fr.*, Paris, 1949: 335-337.

Associated with *B. taurus ibericus*, *Connchoetes taurinus prognu*, *Alcelaphus bubalis*, *Gazella atlantica*, *Sus* sp., *Equus mauritanicus*, *Canis* sp.

Si Ahmad Berhat, 60 km. S. of Mazagan, 18 km. from the coast, Morocco.

1950a. Les mammifères du quaternaire de Rabat (Premiers résultats). *Bull. Soc. Sci. nat. Maroc.*, Rabat, 28: 34-36.

Names only: not in stratigraphical sequence.

[See also ARAMBOURG, 1938a.]

1950b. Longévité de l'ordre des proboscidiens fossiles au Maroc. *Bull. Soc. Sci. nat. Maroc.*, Rabat, 28: 87-99, 2 pls., 1 text-fig.

Mastodons in Miocene of Taourirt, in Upper Miocene of plain of Beni-Amir, in Upper Pliocene of Port Lyautey. [See also 1949a.]

Elephas meridionalis at base of Quaternary, replaced by *E. atlanticus maroccanus* and *E. iolensis* which disappear at end of palaeolithic. *E. africanus* persists from neolithic to beginning of Christian era.

ESTAUNIE, M. D., 1941. Nouvelles stations préhistoriques du département d'Oran. *Bull. Soc. Géogr. Oran*, 62: 177-184.

Felis pardus, *Equus asinus africanus*, *Bubalus antiquus*, *Alcelaphus bubalis*, *Gazella atlantica*. "Couche inférieure A".

Felis leo, *F. pardus*, *Vulpes nilosius* [sic = *niloticus*], *Equus* sp., *Sus scrofa*, *Hystrix cristata*, *Lepus egyptius*, *Meriones saw* [sic = *shawi*], *Bubalus antiquus*, gazelle indet.

"Couche supérieure B".

Beni Smiel, 2.25 km. S. of Lamoricière, commune mixte de Sebdou, arrondissement of Tlemcen.

FALCONER, H., 1849. See MORTON, 1849.

1864. Note on some teeth of *Hippopotamus* from Nubia. *Quart. J. geol. Soc.*, London, 20: 94.

Hippopotamus amphibius.

[Pleistocene alluvium]: "near the old temple of Kálábshé, Nubia".

1865. On the asserted occurrence of human bones in the ancient fluvial deposits of the Nile and Ganges: with comparative remarks on the alluvial formation of the two valleys. *Quart. J. geol. Soc. London*, 21: 372-389.

Hippopotamus amphibius teeth descr.

Alluvium: Kalábshee, Nile Valley.

H. annectens Falc., 1849, may be the same as *H. pentlandi* Falc.

FICHEUR, E., & BRIVES, A., 1900. Sur la découverte d'une caverne à ossements, à la carrière des Bains-Romains à l'ouest d'Alger. *C.R. Acad. Sci. Paris*, 130: 1485-1487.

Canis familiaris?, feline, viverrine, rodents, *Bubalus antiquus* Duvernoy, *Bos opisthonomus* Pomel, *Cervus pachygenys* Pomel, *Connchoetes prognu* Pomel, *Boselaphus* cf. *probubalis* Pomel, *Antilope (Dorcas) crassicornis* Pomel, *A. (D.) nodicornis* Pomel, *A. (D.) triquetri-cornis*, *Antilope* sp. "deux fois plus fort que *A. crassicornis*", *Hippopotamus icosiensis* Pomel, *Rhinoceros subinermis* Pomel, *Equus asinus africanus* (?) Sanson.

Upper Pleistocene.

FILHOL, H., 1878. Note sur la découverte d'un nouveau mammifère marin (*Manatus coulombi*) en Afrique, dans les carrières de Mokattam près du Caire. *Bull. Soc. philom. Paris*, (7) 2: 124-125.

Manatus coulombi sp. nov.

Eocene.

FLAMAND, G. B. M., 1902 (1901). Sur l'utilisation, comme instruments néolithiques, de coquilles fossiles à taille intentionale (Littoral du Nord-Africain). *C.R. Ass. franç. Av. Sci.*, Paris, 30, 2: 729-734, 1 pl.

Equus caballus, *E. mauritanicus* Pomel, *Bubalus antiquus* Duvern., *Bos opisthonomus* Pomel, *B. ibericus*, *Cervus* indet., *Dorcas gazella*, *D.* indet., *Nagor maupasi* Pomel, *Oreas* indet., *Ovis promaza* (?), *O. cf. africana* (?), *O. traguelaphus* [sic], *Chonnochoetes* [sic] *prognu*, *Boselaphus bubalis*, *Camelus* (?), *Camelopardalis* (?) indet., *Hippopotamus major* (?), *H. icosiensis*, *Phacochoerus mauritanicus*, *Sus barbarus*, *S. scrofa*, *Canis aureus*, *C. familiaris*, *Felis catus* (?), *Ursus libycus*, *Felis leopardus*, *Hyaena spelaea*, *H. vulgaris*, *Lepus timidus* (?), "Leporidés" (?), *Hystrix cristata*, *Pithecius gesilla* [Blainv., 1839] (?).

Identifications by Pomel in part.

Upper Pleistocene: Mustapha Supérieur (boulevard Bru), Algiers.

[*Anthropologie*, 12: 759-760.]

FOURTAU, R., 1900 (1899). Observations sur les terrains Éocènes et Oligocènes d'Égypte. *Bull. Soc. géol. Fr.*, Paris, (3) 27: 480-491

Zeuglodon.

Eocene: Mokattam; Gebel Tourah.

1920. *Contribution à l'étude des vertébrés miocènes de l'Égypte*. xii + 122 pp., 3 pls., 68 text-figs., Cairo (Govt. Press).

Cyrtodelphis aff. *sulcatus* P. Gervais, *Delphinus van zelleri* R. Fourtau 1918 [sp. nov.], *Teleoceras snowi* R. Fourtau 1918 [sp. nov.], *Brachyodus africanus* Andrews, *B. moneyi* R. Fourtau 1918 [sp. nov.], *B. moneyi* var. *strictidentata* nobis [var. nov.], *Masritherium* R. Fourtau 1918 [gen. nov.], *M. depereti* R. Fourtau 1918 [sp. nov.], *Mastodon angustidens* Cuvier var. *libyca* R. Fourtau 1918 [var. nov.], *M. spenceri* R. Fourtau 1918 [sp. nov.], *Hyaena* sp. indet., *Prohylobates* R. Fourtau 1918 [gen. nov.], *P. tandyi* R. Fourtau 1918 [sp. nov.], (?) *Dryopithecus mogharensis* R. Fourtau 1918 [sp. nov.].

Miocene (Burdigalian): Hateyet el Moghara, 30° 28' N., 29° E.

[The paper given as R. Fourtau, 1918, is a ghost. All genera and spp. quoted from it are new in this publication.]

FRAAS, E., 1904a. Neue Zeuglodonten aus dem unteren Mitteleocän vom Mokattam, bei Cairo. *Geol. paläont. Abh.*, Jena, (2) 6: 199-220, 3 pls.

Protocetus atavus gen. et sp. nov., *Mesocetus schweinfurthi* sp. nov.

1904b. Neue Zeuglodonten aus dem unteren Mitteleozän vom Mokattam bei Cairo. *Mitt. Nat.-Kab. Stuttgart*, 27.

[An exact reprint of 1904a with new t.p. These *Mittheilungen* are largely separata from other serial publications.]

1904c. Neue Zeuglodonten aus dem unteren Mitteleozän vom Mokattam bei Cairo. *Geol. Zbl.*, Leipzig, 5: 374.

Author's summary of 1904a. *Eocetus* nom. nov., for *Mesocetus* Fraas 1904 non Moreno 1892 nec Van Beneden 1880.

1907a. Pleistozäne Fauna aus den Diamantseifen von Südafrika. *Z. dtsh. geol. Ges.*, Berlin, 59: 232-243, 1 pl., 2 text-figs.

Equus cf. *zebra* L., *Hippopotamus amphibius* L. var. *robustus*, *Mastodon* sp., *Damaliscus* sp. Terrace of the Vaal River, Pleistocene: Waldeck's Plant near Barkly West [near Windsor-ton, N. of Kimberley].

[*Anthropologie*, 18: 642-643.]

FRAAS, E. (*contd.*)

1907b. Pleistocène Fauna aus den Diamantseifen von Südafrika. *Mitt. Nat.-Kab. Stuttgart*, **43**: 1–11, 1 pl., 2 text-figs.

[Separate copies, with new imprint, of 1907a, q.v.]

FRAIPONT, J., 1908. L'Okapi: sur les affinités avec les giraffidés vivants et fossiles. *Bull. Acad. Belg. Cl. Sci.*, Brussels, **1908**, 12: 1097–1130, 4 pls.

Comparison with *Paleotragus*.

GAILLARD, C., 1934. Contribution à l'étude de la faune préhistorique de l'Égypte. *Arch. Mus. Hist. nat. Lyon*, **14** 3: 1–126, 12 pls., 55 text-figs.

Hyaena crocuta Erxleben, race *spelaea*; *Equus asinus* Linné; *E. caballus* Linné; *Hippopotamus amphibius* Linné, race *major* Owen; *Bos brachyceros* Owen; *B. primigenius* Bojanus; *Bubalus vignardi* sp. nov., *Bubalis buselaphus* Pallas; *Gazella isabella* Gray.

[Pleistocene] Palaeolithic (Sebilien): Kom Ombo, 165 km. S. of Luxor.

[*Anthropologie*, **45**: 142–143.]

GATTEFOSSÉ, J., 1937. L'homme-singe préhistorique et le Moghreb. *Rev. Géogr. maroc.*, Casablanca, **21**: 210–213.

Brief discussion of ancient legends and the magical practices of certain Moroccan confraternities. Not zoological.

GAUDRY, A., 1876a. Sur un hippopotame fossile découvert à Bône (Algérie). *Bull. Soc. géol. Fr.*, Paris, (3) **4**: 501–504, 1 pl.

Hippopotamus hipponensis sp. nov.

[See also PAPIER, 1876.]

1876b. Sur un hippopotame à six incisives inférieures trouvé fossile en Algérie. *C.R. Acad. Sci. Paris*, **83**: 90–92.

Hippopotamus hipponensis.

Pliocene: Duvivier, left bank of the Seybouse, nr. Bône.

1879. [Sur un dent de Rhinocéros d'Algérie.] *Bull. Soc. géol. Fr.*, Paris, (3) **7**: 609.

Tooth of a species resembling *R. tichorhinus*.

[Pleistocene]: Chetma oasis, N. Algeria.

1887. [Présentation d'une photographie du *Bubalus antiquus*.] *Bull. Soc. géol. Fr.*, Paris, (3) **15**: 193.

[Pleistocene]: Oued-Seguen [Algeria].

1891a. Le mastodonte du Chérichira. *C.R. Acad. Sci., Paris*, **112**: 1297–1298.

Advance notice of 1891b.

1891b. Quelques remarques sur les mastodontes à propos de l'animal du Chérichira. *Mém. Soc. géol. Fr.*, Paris, **2** 1 [mem. 8 of whole series]: 1–6, 2 pls.

Mastodon angustidens.

Middle Miocene: Chérichira, Tunisia.

Mastodon turicensis.

[Horizon?]: "Khenchela, au pied nord de l'Aurès." [E. Algeria.]

GEAR, J. H. S., 1926. A preliminary account of the baboon remains from Taungs. *S. Afr. J. Sci.*, Johannesburg, **23**: 731–747, 7 figs.

Papio africanus, *P. izodi* [sp. nov.].

Date uncertain: Buxton, nr. Taungs, Bechuanaland.

GEIKIE, J. See RAMSAY & GEIKIE.

GEORGE, M., 1950. A Chalicotherium from the Limeworks Quarry of the Makapan Valley, Potgietersrust District. *S. Afr. J. Sci.*, Johannesburg, **46**: 241–242, 2 figs.

Metaschizotherium (?) *transvaalensis* sp. nov.

[Lower or Middle Pleistocene?.]

GERVAIS, P., 1848–1852. *Zoologie et paléontologie françaises*. 1. Texte, viii + 271 pp.; 2. Explication des planches et divers mémoires [150 pp.; many not numbered, others with fresh pagination to each part as issued]; Atlas, 80 pls.

Elephas africanus.

Holocene?: neighbourhood of Guelma, also Cherchel.

Mastodon indet.

Pliocene: Smendou, prov. Constantine.

[See 1849b, 1850(1849)b, 1850a, 1851(1850). The figure mentioned in 1849b was not publ. in *Zool. paléont. franç.* Dates of issue and contents of parts unknown. C. D. Sherborn inserted all available information in copy belonging to Brit. Mus. Geol. Dept.]

1849a. Sur la présence à l'état fossile dans l'Algérie de deux espèces de mammifères proboscidiens des genres Eléphant et Mastodonte. *L'Institut*, Paris, **17**: 83.

[Title only; publ. 14 Mar. 1849.]

1849b. Sur la présence à l'état fossile dans l'Algérie de deux espèces de mammifères proboscidiens des genres Eléphant et Mastodonte. *C.R. Acad. Sci. Paris*, **28**: 362–364.

Elephant nearer to *E. primigenius* and *E. meridionalis* than to African species.

Cherchell, province of Oran.

Mastodont resembling *M. brevirostre* Gervais or *M. arvernensis* Croizet rather than *M. angustidens*.

The Smendou, nr. Constantine.

[Publ. post 1849a.]

1849c. Eléphant et mastodonte fossiles en Algérie. *L'Institut*, Paris, **17**: 101.

[Abstr. of 1849b. Reprinted as 1850 (1849)b.]

1849d. Sur la répartition des mammifères fossiles entre les différents âges tertiaires qui composent le sol de la France. *L'Institut*, Paris, **17**: 194–198.

Bos primigenius, *Cervus* large sp.

La Grotte des Veaux marins, nr. Bougie.

[Footnote, p. 196; no ref. in text.]

1849e. Sur la répartition des mammifères fossiles entre les différents âges tertiaires qui composent le sol de la France. *C.R. Acad. Sci. Paris*, **28**: 546–552.

[Footnote on p. 550. A repetition of preceding, and repeated as following items.]

1850 (1849)a. Sur la répartition des mammifères fossiles entre les différents étages tertiaires qui concourent à former le sol de la France. *Mém. Acad. Sci. Montpellier*, **1**: 203–222.

Bos primigenius, large sp. of deer.

La Grotte des Veaux-Marins, near Bougie, on coast of Kabylia.

[Footnote p. 215: no ref. in text.]

[1851 on t.p. of volume of 4 pts. for 1847–1850 incl. Parts apparently published in year following that to which they relate.]

GERVAIS, P. (*contd.*)

1850 (1849)*b*. Eléphant et mastodonte fossiles en Algérie. *P.V. Acad. Sci. Montpellier*, 1849: 12-13.

[Abstr. of 1849*b*.]

[*P.V.* extracted from *L'Institut*, Paris, reset and repaged. B.M.N.H. has 1847-1850 incl. Dates of publ. were: 1847 *post* 9 Febr. 1848; 1848 *post* 17 Jan. 1849; 1849 *post* 13 Febr. 1850; 1850 *post* 18 Sept. 1850. *P.V.* for 1850 end at 15 July.]

1850*a*. [*Elephas africanus* fossile en Algérie.] *L'Institut*, Paris, 18: 180-181.

Sixth lower molar found near Guelma, province of Constantine.

[5 June 1850. See also 1851 (1850).]

1850*b*. [*Elephas africanus* fossile en Algérie.] *P.V. Acad. Sci. Montpellier*, 1850: 21.

[1850*a* reprinted.]

1851 (1850). Sur des débris fossiles de mastodonte et d'*Elephas africanus* découverts en Algérie. *Mém. Acad. Sci. Montpellier*, 1: 415-423, 2 pls.

Mastodont tooth figd.

Smendou, nr. Constantine.

E. africanus tooth figd.

Tufa: Guelma.

A tooth found at Cherchell probably *E. africanus*.

[*post* Apr. 1850: footnote (4), p. 420. See also 1849*b*, 1850 (1849)*b*.]

1859. *Zoologie et paléontologie françaises*. ed. 2. viii + 544 pp., atlas 84 pls. Paris.

1848-1852 revised and augmented.

Elephas africanus, *E. primigenius*? (cited by Cuvier), *Equus fossilis* or *adamiticus*, *Rhinoceros*, *Bubalus antiquus*, *Bos primigenius*?, *Antilope* spp., *Hippopotamus major*, *Phacochoerus*, *Ursus*, *Canis*, *Hyaena*.

Various horizons and localities.

[Amended versions of 1850 (1849)*a*, 1851 (1850), on pp. 71-75.]

1867-1869. *Zoologie et paléontologie générales*. vii + 263 pp., 50 pls. Paris.

Elephas meridionalis, *Rhinoceros*, *Equus*, *Bos*, *Antilope strepsiceros* Pallas, *Antilope* sp., *Hippopotamus major*.

Diluvial: Mansourah plateau, nr. Constantine, Algeria.

[See also BAYLE, 1854.]

Bubalus antiquus.

Quaternary: nr. Sétif, Algeria.

GOBERT, E. [G.], 1912. L'abri de Redeyef. *Anthropologie*, Paris, 23: 151-168, 11 figs.

"Gazelles, mouflon, alcélaphe (rare), un bovidé de taille moyenne, sanglier, renard, chacal, genette, mangouste, chat libyque, lièvre, porc-épic, gundi, meriones, gerboise, hérisson, et macroscelidés" associated with palaeolithic and neolithic cultures.

Djebel Redeyef (contrôle de Gafsa, Tunisie).

1950. Le gisement paléolithique de Sidi Zin (avec une notice sur la faune, par R. Vaufrey). *Karthago*, Tunis, 1: 1-50, 6 pls., 16 text-figs.

["Paléontologiquement, les quatre niveaux sont peu dissemblables: On y trouve l'*Equus mauritanicus*, le Gnou, l'Alcélaphe, un grand Bovidé. L'Eléphant antique cependant n'est représenté que dans le niveau inférieur. . . *Taurotragus* est signalé comme probable dans le niveau moyen"] R.V. in *Anthropologie*, 56: 115-117.]

- GOBERT, E. G., & VAUFREY, R., 1932. Deux gisements extrêmes d'iberomaurusien. *Anthropologie*, Paris, **42**: 449-490, 19 figs.
Equus cf. *burchelli*, *E.* cf. (*Asinus*) *africanus*, *Sus scrofa*, *Gazella* sp. . . . de la taille de *G. dorcas*, *Bos taurus ibericus* Sanson, *Ovis* or *Capra* sp., *Canis vulpes atlantica*, *Hyaena crocuta*, *H. striata*, *Felis leo*, *F. ocreata*, *Oryctolagus cuniculus*, *Hystrix cristata*.
 Grotte d'Ain Rahmane, W. of Casablanca, Morocco.
- GRABHAM, G. W., 1920. Notes. *Sudan Notes*, Khartoum, **3**: 130-136.
 [*Elephas*, *Giraffa*, *Hippopotamus*], ox, [*Tragelaphus*?] 60 ft. below low river level; foundation of Blue Nile bridge, Khartoum.
Equus sp. [? *E. burchelli*], ox, antelope, [*Rhinoceros*?] 14 metres depth in well; 3 hrs. W. of Wad Medani.
 [See also ANDREWS, 1912b.]
- GRAZIOSI, P. See STEHLIN & GRAZIOSI.
- GREGORY, W. K., 1920. Studies in comparative myology and osteology: no. IV—A review of the evolution of the lacrymal bone of vertebrates with special reference to that of mammals. *Bull. Amer. Mus. nat. Hist.*, New York, **42**: 95-263, 1 pl., 197 text-figs.
Protocetus atavus, *Prozeuglodon atrox*, *Orcyteropus*, *Pedetes*, *Moeritherium*, *Palaeomastodon*, *Eosiren*, *Arsinoitherium*, *Megalohyrax*, *Hippopotamus*, *Phacochoerus*, *Potamochoerus*, *Ceratotherium simum*, [*Diceros bicornis*].
 Inter-relationships and derivations of the Orders of mammals as shown by this bone.
 [t.f. numbered 1-196 but an additional one is 182a.]
1930. The origin of man from a brachiating anthropoid stock. *Science*, New York, **71**: 645-650.
Australopithecus a link between an older dryopithecoid group and primitive man.
1949. The bearing of the Australopithecinae upon the problem of man's place in nature. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) **7**: 485-512, 14 figs.
 General discussion; relationship to man left undecided.
- GREGORY, W. K., & HELLMAN, M., 1938. Evidence of the australopithecine man-apes on the origin of man. *Science*, New York, **88**: 615-616.
 Brief discussion of the dental characters of *Australopithecus africanus*, *Paranthropus robustus*, and *Plesianthropus transvaalensis*.
- 1939a. The dentition of the extinct South African man-ape *Australopithecus* (*Plesianthropus*) *transvaalensis* Broom. A comparative and phylogenetic study. *Ann. Transv. Mus.*, Pretoria, **19**: 339-373, 14 figs.
 Detailed description and discussion.
 Australopithecine group, derived from *Dryopithecus-Sivapithecus* stock, were structurally and genetically conservative cousins of the contemporary human branch.
 Middle Pleistocene: Sterkfontein. [*Anthropologie*, **49**: 627.]
- 1939b. Fossil man-apes of South Africa. *Nature*, London, **143**: 25-26, 3 figs.
 Condensed account of dentition of *Plesianthropus transvaalensis*. Pleistocene man-apes survivors of the *Dryopithecus* stock. [*Anthropologie*, **50**: 200-201.]
- 1939c. The South African fossil man-apes and the origin of the human dentition. *J. Amer. dent. Assoc.*, Chicago, **26**: 558-564, 6 figs.
Proconsul africanus, *Plesianthropus transvaalensis*, *Paranthropus robustus*.
 "The facts cited . . . can hardly leave a . . . doubt that the Australopithecine group were derived from the *Dryopithecus-Sivapithecus* stock . . . the common source of apes and man . . . and . . . were in both a structural and genetic sense the conservative cousins of the contemporary human branch."

GREGORY, W. K., & HELLMAN, M. (*contd.*)

1940. The upper dental arch of *Plesianthropus transvaalensis* Broom, and its relation to other parts of the skull. *Amer. J. phys. Anthropol.*, Philadelphia, **26**: 211–228, 4 pls., 1 text-fig.

Provisional reconstruction of skull and mandible, particularly of the upper and lower dental arches.

1945. Revised reconstruction of the skull of *Plesianthropus transvaalensis* Broom. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) **3**: 267–275, 3 pls.

A revision of 1940, q.v.

GUYON, 1841. [Restes de l'éléphant dans le nord de l'Afrique.] *C.R. Acad. Sci. Paris*, **12**: 1195.

Bones found with pottery at a depth of about 30 [Paris?] feet.

Phillippeville.

[Brief note: title supplied from index to authors.]

HAHN, H., 1934. Die Familie der Procaviidae. *Z. Säugetierk.*, Berlin, **9**: 207–358, 4 pls., 69 text-figs.

Comparative anatomy, classification, ecology and distribution of Recent spp., review of fossil spp. Important bibliography.

Dendrohyrax dorsalis (Fraser), *D. validus* True, *D. arboreus* (Smith), *Heterohyrax syriacus* (Schreber), *Procavia capensis* (Pallas), *P. johnstoni* Thomas, *P. habessinica* (Ehrenberg), *P. ruficeps* (Ehrenberg); all Recent spp.

Fossil spp. discussed are:

Geniohyus minor Andrews, *G. micrognathus* Schlosser, *Bunohyrax fayumensis* Andrews, *B. major* Andrews, *Pachyhyrax crassidentatus* Schlosser, *Mixohyrax andrewsi* Schlosser (= *Megalohyrax minor* Andr. in Matsumoto, 1926), *Mixohyrax niloticus* Schlosser (= *Megalohyrax niloticus* in Mats. 1926), *Mixohyrax suillus* Schlosser (= *Megalohyrax suillus* in Mats. 1926), *Megalohyrax eocaenus* Andrews (= *Titanohyrax schlosseri* in Mats. 1926), *Megalohyrax palaeotheroides* Schlosser (= *Titanohyrax palaeotheroides* in Mats. 1926), *Megalohyrax minor* Andrews (= *Titanohyrax andrewsi* in Mats. 1926), *Saghatherium antiquum*, *S. majus*, *S. magnum*, *S. minus*.

Oligocene: Fayûm, Egypt.

Prohyrax tertiarius Stromer.

Lower Miocene: Langental, Namib.

Saghatherium ancestral to recent *Procavia*, *Dendrohyrax*, *Heterohyrax*, and extinct *Pliohyrax*.

HAUG, E., 1911. *Traité de Géologie*, **2**, 3: 1397–2024, pls. 120–135, text-figs. 405–485, Paris.

Brief summary of Fayûm fauna pp. 1556–1558; of Omo fauna p. 1727, pl. 130; of Victoria Nyanza [Karungu] fauna p. 1727.

HAUGHTON, S. H., 1922 (1921). A note on some fossils from the Vaal River gravels. *Trans. geol. Soc. S. Afr.*, Johannesburg, **24**: 11–16, 1 pl.

Loxodonta griqua sp. nov., *Griquatherium cingulatum* gen. et sp. nov., *Hippopotamus amphibius* var. *robustus* Fr.

Pleistocene: Vaal river gravels, nr. Kimberley.

1925. [On the occurrence of a species of baboon in limestone deposits near Taungs.] *Trans. Roy. Soc. S. Afr.*, Cape Town, **12**: lxviii.

Papio antiquus sp. nov.

Early or pre-Pleistocene.

[Abstract only. Title supplied.]

HAUGHTON, S. H. (*contd.*)

1932a. On some South African fossil Proboscidea. *Trans. Roy. Soc. S. Afr.*, Cape Town, **21**: 1-18, 4 pls., 8 text-figs.

Archidiskodon cf. *subplanifrons* Osborn.

"Middle Terrace", Vaal River Gravels: Gong-Gong.

Pilgrimia archidiskodontoides sp. nov.

[Vaal River Gravels]: Sydney-on-Vaal Breakwater.

Pilgrimia subantiqua sp. nov.

"Higher terrace", Vaal River gravels: Delpot's Hope.

Pilgrimia sp.

[Pleistocene]: Usakos, S.W. Africa.

Loxodonta africana.

[Upper Pleistocene or Holocene]: Morokwen, Bechuanaland.

1932b. The fossil Equidae of S. Africa. *Ann. S. Afr. Mus.*, Cape Town, **28**: 407-427, 6 figs.

General revision of the following spp.:

Eurygnathohippus cornelianus van Hoepen, *Hipparion steytleri* van Hoepen, *Equus harrisi* Broom = *E. (Sterrohippus) harrisi* Broom, *Sterrohippus robustus* van Hoepen = *Equus (S.) harrisi* Broom, *Equus capensis* Broom, *E. simplex* van Hoepen = *E. capensis* Broom var. *simplex* van Hoepen, *E. westphali* Dreyer = *E. capensis* Broom, *E. cawoodi* Broom, *E. helmei* Dreyer = *E. cawoodi* Broom, *E. kuhni* Broom, *E. louwi* van Hoepen = *E. kuhni* Broom, *E. platyconus* van Hoepen = *E. quagga* var., *Kraterohippus elongatus* van Hoepen = *E. quagga* var., *Kolpohippus plicatus* van Hoepen = *E. quagga* var., *E. lylei* Dreyer = *E. quagga wahlbergi* (?), *E. simplicissimus* van Hoepen = ? *E. gigas* van Hoepen (transitional to zebra group).

Equus sandwithi sp. nov.

Late Pleistocene: Usakos, S.W. Africa.

Notohipparion namaquense gen. et sp. nov.

Horizon uncertain: 40 miles E. of Springbok, Namaqualand.

HELLMAN, M. See GREGORY & HELLMAN.

HENNIG, E., 1938. Nach Broom, R.: The Pleistocene anthropoid apes of South Africa. *Cbl. Min. Geol. Paläont*, Stuttgart, **1938 B**: 383-384.

Review of BROOM, 1938b, q.v.

HILZHEIMER, M., 1925. *Rhinoceros simus germano-africanus* n. sub-sp. aus Oldoway. *Wiss. Ergebn. Oldoway-Exped.*, 1913, (N.F.) **2**: 45-79, 1 pl., 4 text-figs.

[Middle Pleistocene.]

HOEPEN, E. C. N. VAN, 1930a. Vrystaatse fossiele perde. *Paleont. Navors. nas. Mus.*, Bloemfontein, **2**: 1-11, 10 figs.

Equus gigas sp. nov., *E. cawoodi* Broom, *E. platyconus* sp. nov., *E. simplex* sp. nov., *Kraterohippus elongatus* gen. et sp. nov.

Pleistocene: various localities.

Equus simplicissimus sp. nov., *Sterrohippus robustus* gen. et sp. nov., *Kolpohippus plicatus* gen. et sp. nov.

Pliocene: various localities.

1930b. Fossiele perde van Cornelia O.V.S. *Paleont. Navors. nas. Mus.*, Bloemfontein, **2**: 13-24, 22 figs.

Equus louwi sp. nov.

Middle Pliocene: Uitsoek, nr. Cornelia, O.F.S.

E. simplicissimus van H.

Lower Pleistocene?: Uitsoek.

HOEPEN, E. C. N. VAN (*contd.*)

Hipparion steytleri **sp. nov.**

Pliocene: Uitsoek.

Eurygnathohippus cornelianus **gen. et sp. nov.**

Pliocene: Uitsoek.

1932a. Die Stamlyn van die Sebras. *Paleont. Navors. nas. Mus., Bloemfontein*, 2: 25-37, 23 figs.

Notohipparion namaquense Haughton.

Stylohipparion hipkini **gen. et sp. nov.**, *S. steytleri* (van H.).

Cornelia Lae [= Pleistocene?]: Uitsoek, nr. Cornelia, O.F.S.

1932b. Voorlopige beskrywing van Vrystaatse soogdiere. *Paleont. Navors. nas. Mus., Bloemfontein*, 2: 63-65, 5 figs.

Orangiaetherium vanrhyni **gen. et sp. nov.**; *Megalotragus eucornutus* **gen. et sp. nov.**; *Pelorocerus* **gen. nov.** for *Bubalis helmei* Lyle, 1931; *Gorgon laticornutus* **sp. nov.**; *Gazella helmoedi* **sp. nov.**

[Neither horizon nor locality stated, but ? = Pleistocene of Cornelia, O.F.S., see foot of p. 65.]

1940. Oor die tande van die Equinae. *Tydskr. Wetensk. Kuns, Bloemfontein*, (N.S.) 1: 101-114, 15 figs.

Morphology of incisor teeth of *Hippotigris*, *Asinus*, *Equus*.

1947. A preliminary description of new Pleistocene mammals of South Africa. *Paleont. Navors. nas. Mus., Bloemfontein*, (2) 7: 103-106, 3 figs.

Pelorocerus mirum **sp. nov.**

Pleistocene: Mahenispán, O.F.S.

P. helmei (Lyle); *P. elegans* **sp. nov.**

Pleistocene: ? locality.

HOEPEN, E. C. N. VAN, & HOEPEN, H. E. VAN, 1932. Vrystaatse wilde Varke. *Paleont. Navors. nas. Mus., Bloemfontein*, 2: 39-62, 77 figs.

Phacochoerus africanus and *P. aethiopicus*; descr. and figs. of Recent and Pleistocene teeth.

Phacochoerus laticolumnatus **sp. nov.**

Horizon not stated [late Pleistocene?]: Rouxville, O.F.S.; Uitsoek, nr. Cornelia, O.F.S.

Stylochoerus compactus **gen. et sp. nov.**

Horizon and locality?

Synaptochoerus hieroglyphicus **gen. et sp. nov.**, *Tapinochoerus modestus* **gen. et sp. nov.**,

Kolpochoerus sinuosus **gen. et sp. nov.**

Cornelia Lae [Pleistocene?]: Uitsoek, nr. Cornelia, O.F.S.

HOOIJER, D. A., 1945. Note on sub-fossil teeth of *Equus zebra* L. from Orange Free State. *Zoöl. Meded.*, Leiden, 25: 101-108, 2 pls., 1 text-fig.

Right upper cheek teeth (P³-M³).

Between Glen and Mazelspoort, O.F.S.

[*Anthropologie*, 53: 374-375].

HOPWOOD, A. T., 1926a. Some Mammalia from the Pliocene of Homa Mountain, Victoria Nyanza. *Ann. Mag. nat. Hist.*, London, (9) 18: 266-272, 2 figs.

Hippopotamus amphibius Linnaeus, *Metridiochoerus andrewsi* **gen. et sp. nov.**, *Phacochoerus aethiopicus* Linnaeus, *Bos* indet. [indeterminate, not *Bos*], *Elephas antiquus recki* Dietrich.

[Probably Middle Pleistocene, age of Olduvai.]

HOPWOOD, A. T. (*contd.*)

1926b. Fossil Mammalia in: The Geology and Palaeontology of the Kaiso Bone Beds. *Occ. Papers Geol. Surv. Uganda Protect.*, 2: 13-36, 3 pls., 14 text-figs.

? *Machairodus* sp., *Rhinoceros scotti* **nom. nov.**, *Hipparion albertensis* **sp. nov.**, *Equus zebra* Linné, *Sus limnetes* **sp. nov.**, *Hylochoerus euilus* **sp. nov.**, *Hippopotamus amphibius kaisensis* **sub-sp. nov.**, *H. imaguncula* **sp. nov.**, *Elephas zulu* Scott, *E. aff. meridionalis* Nesti. Various fragments doubtfully referred to *Bos*, *Bos* (*Bubalus*), *Tragelaphus*, *Aepyceros*, *Boselaphus*, *Oryx*, but not further described.

[*Rhinoceros scotti* = *Ceratotherium simum* sub-sp.; *Equus zebra* = sp. indet.; *Sus limnetes* is probably *Potamochoerus* sp.; *Hippopotamus amphibius kaisensis* is probably the same as *H. gorgops* Dietrich, which has priority; *E. zulu* Scott and *E. aff. meridionalis* Nesti = *Archidiskodon griqua* Haughton.]

1927. On some mammalian remains from Lake Nyasa. *Quart. J. geol. Soc. London*, 83: 442-444.

Mastodon, *Hippopotamus*.

Chiwondo beds, Pliocene [Lower Pleistocene]: Uraha Hill, 8 miles S. of Vua, N. Nyasaland.

1928a. Mammalia in: PYCRAFT, W. P., and others, Rhodesian Man and associated remains. pp. 70-73, 1 fig., London. Trustees of the British Museum.

Crocidura Wagler, *Elephantulus*?, *Mus* Linné, *Rattus* Frisch, *Saccostomus* Peters, *Arvicanthis* Lesson, *Lophuromys* Peters, *Leggada* Gray, *Otomys* F. Cuvier, *Tatera* Lataste, *Hystrix* Linné, *Georhynchus* Gray, *Felis leo* Linné, *F. pardus* Linné, *Leptailurus hintoni* **sp. nov.**, *Crocota* cf. *crocota* Erxleben, *Diceros whitei* Chubb, *D. cf. simus* (Burchell), *Equus burchelli böhmi* Matschie?, *Phacochoerus aethiopicus* (Linné), *Connochaetes taurinus* (Burchell), *Taurotragus oryx* (Pallas), *Tragelaphus* sp., *Strepsiceros strepsiceros* (Pallas), *Bubalus caffer* (Sparrm.), *Giraffa camelopardalis* (Linné), *Elephas africanus* Blumenbach.

Age unknown: Broken Hill Mine, 150 miles N. of Kafue River, N.W. Rhodesia.

1928b. The fossil climates of Central Africa. *Int. geogr. Congr.*, Cambridge, 11: 303-304.

Climatic changes and their effects on the fauna.

1929a. *Hylochoerus grabhami*, a new species of fossil pig from the White Nile. *Ann. Mag. nat. Hist.*, London, (10) 4: 289-290.

Hylochoerus grabhami **sp. nov.**

"45 ft. depth in a well" [Pleistocene]: Lat. 13° 9½' N., Long. 32° 40½' E.

1929b. New and little known mammals from the Miocene of Africa. *Amer. Mus. Nov.*, New York, 344: 1-9, 6 figs.

Austrolagomys simpsoni **sp. nov.**, *Apodecter stromeri* **gen. et sp. nov.**, *Phthinylia fracta* **gen. et sp. nov.**, *Rodentia* indet. (*Parapedetes*?), *Tragulidae* indet., *Myohyrax doederleini* Stromer. *M. osborni* **sp. nov.**

Discussion of probable habits and the nature of the mandibular movements of *Myohyrax*.

1929c. A review of the fossil mammals of Central Africa. *Amer. J. Sci.*, New Haven, (5) 17: 101-118.

Analysis of the faunas; their age and origin.

1931a. Pleistocene Mammalia from Nyasaland and Tanganyika Territory. *Geol. Mag.*, London, 68: 133-135.

Hippopotamus, *Giraffa*, *Hylochoerus*.

Chiwondo beds [Pleistocene]: Uraha Hill, Lake Nyasa.

Hippopotamus, *Elephas* sp. fragment of mandible with fourth premolar *in alveolo*.

Pleistocene: Wembere Depression, Tanganyika.

HOPWOOD, A. T. (*contd.*)

1931*b*. Correlation of the East African Pleistocene. *Man*, London, **31**: no. 56, pp. 55-56.

Value of human remains and mammalian faunas as stratigraphical indices contrasted.

1931*c*. Preliminary report on the fossil Mammalia in: LEAKEY, L. S. B., 1931 (Appendix C).

I. LOCALITIES OF MAKALIAN AGE:

(a) Bromhead's Site, Munro's Farm, Elmenteita.

Phacochoerus africanus (L.), antelopes, *Bos* sp., *Procavia* sp., *Papio neumanni* Matschie.

(b) Deckerville Site, Enderit Drift.

Hippopotamus amphibius L., antelope, *Elephas* (?)

(c) MacInnes' Site.

Crocuta crocuta (Erxleben), *Equus quagga* sub-sp., ? *Bos* sp., antelope, *Papio neumanni* Matschie.

(d) Euphorbia Flats.

Hippopotamus amphibius L.

(e) Hippopotamus Site.

H. amphibius L.

2. LOCALITIES OF GAMBLIAN AGE:

(a) Gamble's Cave.

Thos adustus (Sundevall), *Lycaon pictus* (Temminck), *Lutra maculicollis* Lichtenstein, *Aonyx capensis hindei* Thomas, *Atilax paludinosus* Geoffroy & Cuvier, *Felis* sp., *Tachyoryctes* sp., *Pedetes* sp., *Hystrix galeatus*?, *Thryonomys swinderianus* (Temminck), *Choeromys* sp., *Lepus* sp., *Orycteropus aethiopicus* Sundevall, two or three monkeys indet., *Choireopotamus choireopotamus* (Desmoulins), *Hylochoerus meinertzhageni* Thomas, *Phacochoerus africanus* L., *Hippopotamus amphibius* L., antelopes, *Redunca* sp., *Procavia* sp.

(b) Lion Hill Cave.

Hyraces, small rodent, monkey.

(c) Malewa River, Naivasha (= Morendat River).

Hippopotamus amphibius L., *Diceros bicornis* (L.), two bovines.

1933*a*. Miocene primates from British East Africa. *Ann. Mag. nat. Hist.*, London, (10) **11**: 96-98.

Limnopithecus legetet gen. et sp. nov., *Xenopithecus koruensis* gen. et sp. nov., *Proconsul africanus* gen. et sp. nov., diagnoses and affinities.

Koru, Kenya Colony.

1933*b*. Miocene Primates from Kenya. *J. Linn. Soc. (Zool.)*, London, **38**: 437-464, 1 pl.

Limnopithecus legetet Hopw., *Xenopithecus koruensis* Hopw., *Proconsul africanus* Hopw. Detailed description of holotypes: comparisons with other anthropoid apes.

Koru, Kenya Colony.

[*Anthropologie*, **45**: 638-639; **52**: 177-178.]

1934. New fossil mammals from Olduvai, Tanganyika Territory. *Ann. Mag. nat. Hist.*, London, (10) **14**: 546-550.

Simopithecus leakeyi sp. nov., *Koiropotamus majus* sp. nov., *Notochoerus dietrichi* sp. nov., *Helladotherium olduvaiensis* sp. nov., *Pultiphagonides africanus* gen. et sp. nov., *Parmularius altidens* gen. et sp. nov.

Middle Pleistocene.

1935. Fossil elephants and man. *Proc. Geol. Ass. London*, **46**: 46-60.

Date of deposits at Kanam and Kanjera, Kenya Colony. [*Anthropologie*, **46**: 375-376.]

HOPWOOD, A. T. (*contd.*)

- 1936a. New and little-known fossil mammals from the Pleistocene of Kenya Colony and Tanganyika Territory. *Ann. Mag. nat. Hist.*, London, (10) 17: 636-641.

Simopithecus oswaldi Andrews.

Middle Pleistocene: Kanjera (Homa Mt.), Kenya.

Simopithecus leakeyi Hopw.

Middle Pleistocene: Olduvai, Tanganyika.

Cercocebus ado **sp. nov.**

Middle Pleistocene: Vogel River (Laetolil), c. 35° 10' E., 3° 10' S.

Deinotherium bozasi Arambourg.

Middle Pleistocene: Olduvai; Vogel River (Laetolil).

Lower Pleistocene: Kanam, Kenya (probably this sp.).

Palaeoloxodon antiquus recki (Dietrich).

Middle Pleistocene: Olduvai; Vogel River (Laetolil).

Bularchus arok **gen. et sp. nov.**

Middle Pleistocene: Kanjera; Olduvai.

Hippotragus niro **sp. nov.**

Middle Pleistocene: Olduvai.

Sivatherium olduvaiensis (Hopw.).

Middle Pleistocene: Olduvai.

Lower Pleistocene: Kagua, Kenya.

Giraffa cf. *capensis* sub-sp.

Middle Pleistocene: Olduvai.

Lower Pleistocene: Rawi, Kenya.

[*Anthropologie*, 48: 207.]

- 1936b. Earth-movements, ice ages and faunas. *Geol. Mag.*, London, 73: 185-188.

Age of the Olduvai deposits discussed.

[*Anthropologie*, 48: 207.]

- 1936c. Contributions to the study of some African mammals.—I. The humerus and femur of certain East African antelopes. *J. Linn. Soc. (Zool.)*, London, 40: 71-92, 6 figs.

Alcelaphus cokei (Günther), *Gorgon taurinus* (Burchell), *Oreotragus oreotragus* (Zimmermann), *Raphicerus campestris* (Thunberg), *Rhynchotragus kirki* (Günther), *Aepyceros melampus* (Lichtenstein), *Gazella thompsoni* Günther, *G. granti* Brooke.

Bones figd. and descr.; general discussion.

Recent fauna: Olduvai, Tanganyika Territory.

[*Anthropologie*, 48: 207.]

1937. Die fossilen Pferde von Oldoway. *Wiss. Ergebn. Oldoway-Exped. 1913*, (N.F.) 4: 111-136, 1 pl.

Stylohipparion cf. *albertense* (Hopw.), *Equus oldowayensis* **sp. nov.**

Partial faunal list; discussion of age.

Middle Diluvial.

[*Anthropologie*, 48: 325-326.]

- 1939a. The mammalian fossils. In O'BRIEN, 1939: 308-316.

1. LOCALITIES OF KAISO AGE:

(a) KAISO. *Phacochoerus* sp., *Hippopotamus kaisensis* Hopw. (? = *gorgops* Dietr.), *H. imaguncula* Hopw., *Stegodon kaisensis* **sp. nov.**, *Simopithecus* sp.

(b) KAZINGA CHANNEL. *Phacochoerus* sp., *H. imaguncula* Hopw., *Taurotragus* sp., *Stegodon kaisensis* Hopw.

(c) KIKAGATI HYDRO-ELECTRIC STATION. *Archidiskodon griqua* Haughton.

2. LOCALITIES OF POST-KAISO AGE:

(a) KAZINGA CHANNEL. *Kobus kob* sub-sp.

(b) NSONGEZI. Antelopes indet., buffalo.

HOPWOOD, A. T. (*contd.*)

(c) [NSONGEZI, 30 FT. TERRACE] = MICROLITHIC LAYER, ROCK EXPOSURE, THIRD TERRACE. Antelopes, *Hippopotamus*, *Hylochoerus*, serval, jackal, wart-hog, gazelle.

(d) WALASI HILL, CHUI CAVE. *Thos* sp., *Panthera pardus* (Linné), *Leptailurus* sp., *Hystrix* sp., *Thryonomys* sp., *Hippotigris quagga* sub-sp., *Diceros bicornis* (Linné), antelopes non det., *Procavia* sp., *Loxodonta africana* (Blumenb.).

1939b. Contributions to the study of some African mammals.—II. The subspecies of the Black Rhinoceros, *Diceros bicornis* (Linnaeus), defined by the proportions of the skull. *J. Linn. Soc. (Zool.)*, London, **40**: 447–457, 2 pls.

Lectotype chosen for *Rhinoceros b. holmwoodi* Sclater. Neotype chosen for *R.b. somaliensis* Potocki.

1940. Fossil mammals and Pleistocene correlation. *Proc. Geol. Ass. London*, **51**: 79–88.

Changes in Pleistocene faunas of Kenya Colony and Tanganyika Territory.

1947a. Contributions to the study of some African mammals.—III. Adaptations in the bones of the fore-limb of the Lion, Leopard, and Cheetah. *J. Linn. Soc. (Zool.)*, London, **41**: 259–271, 5 figs.

[*Panthera leo*, *P. pardus*, *Acinonyx jubatus*.]

1947b. Contribution to the study of some African mammals.—VI. [err. pro IV.] Notes on the interior of the skull in Lion, Leopard, and Cheetah. *J. Linn. Soc. (Zool.)*, London, **41**: 369–376, 2 pls., 2 text-figs.

Endocranial casts, descr. and figs.

[*Panthera leo*, *P. pardus*, *Acinonyx jubatus*.]

1947c. The generic names of the mandrill and baboons, with notes on some of the genera of Brisson, 1762. *Proc. Zool. Soc. London*, **117**: 533–536.

Simopithecus Andrews and *Papio* Erxleben at Olduvai.

Proper name for baboons is *Choeropithecus* Blainville *emend.* Gervais; *Papio* belongs to the Mandrill.

1948. [See discussion of Prof. R. M. SHACKLETON's paper, "A contribution to the geology of the Kavirondo Rift Valley".] *Abstr. Proc. Geol. Soc. London*, **1948–1949**: no. 1445: 12.

Proconsul found at site R106 on Rusinga Island not later than lower Burdigalian.

See also LEAKEY, HOPWOOD & RECK.

See also PILGRIM & HOPWOOD.

HOWE, B., & MOVIUS, H. L., 1947. A stone age cave site in Tangier. *Pap. Peabody Mus. Amer. Archaeol. Ethnol.*, Cambridge, Mass., **28**, 1: 1–22, 8 figs.

Aethechinus algirus, *Thos aureus maroccanus*, *Canis familiaris*, *Felis libyca libyca*, *F. leo leo*, *Equus asinus*, *Sus scrofa algira*, *Gazella soemmerringii*, *Oryx*?, *Ovis aries*, *Capra hircus*, *Ammotragus lervia*, *Bos taurus*, *Syncerus caffer*, *Hystrix cristata*, *Oryctolagus*, *Lepus* ? *kabylicus*.

Associated with neolithic or later cultures.

Bat, *Thos aureus maroccanus*, *Canis familiaris*, *Vulpes vulpes atlantica*, *Felis libyca libyca*, *F. leo leo*, *F. pardus*?, *Hyaena hyaena*, *H. spelaea*, *Herpestes* sp., *Equus burchelli mauritanicus*, *E. asinus*?, *Sus scrofa algira*, *Phacochoerus aethiopicus mauritanicus*, *Hippopotamus amphibius*, *Giraffa camelopardalis*, *Alcelaphus boselaphus*, *Connochaetes* sp., *Gazella* ? *rufifrons* or ? *cuvieri*, *G. dorcas*, *Oryx*?, *Ammotragus lervia*?, *Bos taurus*, *B. primigenius*, *Syncerus caffer* sub-sp., ? *Ceratotherium simum*, elephant, *Hystrix cristata*, *Oryctolagus cuniculus*, *Lepus* ? *kabylicus*.

Associated with palaeolithic cultures: Mugharet el 'Aliya, 5 miles S. of Cape Spartel, 8 miles S.W. of Tangier.

- HRDLIČKA, A., 1925. The Taungs ape. *Amer. J. phys. Anthropol.*, Philadelphia, 8: 379-392, 3 figs.
General description of locality and discovery of *Australopithecus africanus*. Type skull "that of an anthropoid ape . . . in all probability . . . a new species, if not a genus, of the great apes."
- HUENE, F. VON, 1925. Triassicher Säugetierzahn aus Südwestafrika. *Cbl. Min. Geol. Paläont.*, Stuttgart, 1925 B: 174-181, 3 figs.
Archaeotherium reuningi gen. et sp. nov. [non A. Leidy, 1850].
Between the Ugab and Huab Rivers, S.W. Africa.
- HUGHES, A. R. See BROOM & HUGHES.
- HUZAYYIN, S. A., 1941. The place of Egypt in prehistory. *Mém. Inst. Égypte*, Cairo, 43: 1-474, 18 pls.
Contains, *inter alia*, a discussion of successive climates during the Pleistocene and their relation to the changes in fauna and flora. Faunal lists copied from other authors without revision. Full bibliography.
- JANENSCH, W., 1925. Ein strukturell-bemerkenswerter Zahn aus den Oldoway-Schichten in Deutsch-Ostafrika. *Wiss. Ergebn. Oldoway-Exped. 1913*, (N.F.) 2: 93-95.
Indeterminate tooth, possibly *Potamochoerus*.
- JEANNEL, R. See ARAMBOURG & JEANNEL.
- JEFFREYS, M. D. W., 1948. Did *Australopithecus* wield weapons? *S. Afr. Sci.*, Johannesburg, 2: 38-40.
Depressed fractures of the skulls of the associated baboons probably resulted from hyaena-bites, not from weapons used by Australopithecines.
- JENSEN, J. S. See BROOM & JENSEN.
- JOLEAUD, L., 1910. Sur les faunes de mammifères quaternaires de la Berbérie. *Bull. Soc. Hist. nat. Afr. N.*, Alger, 1: 102-104.
African elements in the Barbary fauna seem to have become extinct or migrated to the tropics during the
1. SICILIAN: *Cynocephalus atlanticus* Thom., *Hipparion gracile* Kaup var., *Equus stenonis* Cocchi, *Mastodon* cf. *borsoni* Hays, *Hippopotamus hipponensis* Gaudry, *Palaeoreas gaudryi* Thom., *Antidorcas* sp. (?), *Oreonagor tournoueri* Thom., *Cephalophus* (?) *leporina* Pom.
 2. LOWER PLEISTOCENE: *Elephas meridionalis* Nesti var. *atlanticus* Pom., *Camelus thomasi* Pom., *Giraffa* sp.
 3. MIDDLE PLEISTOCENE: *Hyaena crocuta* Erxl. var. *spelaea* Goldf., *Rhinoceros* cf. *bicornis* L. (*R. subinermis* Pom.), *Hippopotamus amphibius* L. vars *icosiensis* and *sirensis* Pom., *Bubalus antiquus* Duv.
 4. UPPER PLEISTOCENE & NEOPLEISTOCENE: *Equus* cf. *burchelli* Gray (*E. mauritanicus* Pom.), *Rhinoceros* cf. *simus* Burch. (*R. mauritanicus* Pom.), *Elephas africanus* L., *Phacochoerus* cf. *ethiopicus* L. (*P. mauritanicus* et *P. barbarus* Pom.), *Oreas* cf. *canna* Desm. (*O. procanna* et *brevicornis* Pom.), *Oryx* cf. *leucoryx* Pall. (*O. troglodytorum* Pom.), *Kobus tuncuosus* Laurill. [*K. defassa unctuosus*] var. *maupasii* Pom., *Connochaetes* cf. *gnou* Zimm. (*C. prognu* Pom.).
- Species which seem to have invaded Africa from Europe:
1. After the late Sicilian negative movement, *Sus scrofa* L. var. *algeriensis* et *barbarus* Pom., *Cervus elaphus* L. var. *barbarus* Gerv. (?).
 2. After the Middle Pleistocene negative movement, *Ursus spelaeus* Blumenb. var. *larteti* Bourg. [recte *larteti*] et *lybicus* Pom., *Bramus barbarus* Pom., *Cervus* cf. *dama* L. (*C. pachygenys* Pom.).

JOLEAUD, L. (*contd.*)

1912a. Sur la position systématique de *Cervus pachygenys* Pomel du Quaternaire algérien. *C.R. Soc. géol. Fr.*, Paris, 1912: 187.

Preliminary abstract of 1913 (1912).

1912b. Études de géographie zoologique sur la Berbérie. I. Les cervidés. *Rev. africaine*, Alger, 56: 471-499, 1 fig.

[Past and present distribution of *Cervus barbarus*. Origin of *Dama dama*; its presence in N. Africa. *Anthropologie*, 25: 131.]

1912c. Étude géologique de la chaîne Numidique et des monts de Constantine (Algérie). Montpellier.

[Not seen, *teste* SOLIGNAC, 1927. *Elephas meridionalis*, *Hippopotamus major*, *Hipparion gracile* Kaup near Constantine.]

1913 (1912). Sur la position systématique de *Cervus pachygenys* Pomel du Quaternaire algérien. *Bull. Soc. géol. Fr.*, Paris, (4) 12: 468-471, 1 fig.

A retarded species of *Megaceros*. Relationship to *C. megaceros* resembles that of *C. barbarus* Benor. [*recte* Bennett] to *C. elephas* L. [*Anthropologie*, 25: 131.]

1914a. Sur l'âge des éléphants quaternaires d'Algérie. *Bull. Soc. Hist. nat. Afr. N.*, Alger, 5: 130-134.

Age of deposits containing *E. africanus*, *E. antiquus iolensis*, and *E. meridionalis atlanticus* discussed. [*Anthropologie*, 28: 449-450.]

1914b. Sur l'âge de l'*Elephas africanus* en Numidie. *Rec. Not. Mém. Soc. archéol. Constantine*, 48: 203-210.

[Not seen: *teste* CABRERA, 1932; ROMER, 1928.]

1914c. Sur le *Cervus* (*Megaceroides*) *algericus* Lydekker 1890. *C.R. Soc. Biol.*, Paris, 76: 737-739.

Megaceroides **sub-gen. nov.** for *Cervus pachygenys* Pomel, 1892d.

Type species synonymous with *Cervus algericus* Lydekker, 1890.

[*Anthropologie*, 28: 450. See also below.]

1916 (1915). *Cervus* (*Megaceroides*) *algericus* Lydekker, 1890. *Rec. Not. Mém. Soc. archéol. Constantine*, 49: 67 pp., 4 pls.

Megaceroides **sub-gen. nov.**, for *Cervus algericus* Lydekker [but see 1914c]; *C. pachygenys* Pomel, 1892, a synonym of type species.

Addnl. material descr. and fig. Relationships of the species. Distribution in space and time.

Middle Pleistocene: Eastern Algeria, Pisa (Monte Uliveto), Nice, Antibes, Gibraltar.

[Author's reprint apparently re-paged 1-67.] [*Bull. Soc. Géogr. Oran*, 37: 104.]

1917. Les gazelles pliocènes et quaternaires de l'Algérie. *C.R. Soc. géol. Fr.*, Paris, 1917: 30-31.

Summary of 1918 (1917).

1918 (1916). Notice géologique et paléontologique sur la Grotte des Pigeons (Constantine). *Rec. Not. Mém. Soc. archéol. Constantine*, 40: 11 pp., 1 pl.

Equus burchelli granti Wirton [de Winton], *Sus scrofa* L., *Gazella cuvieri* Ogilby, *Capra hircus africana* Sanson, *Ammotragus lervia* Pall., *Bos taurus ibericus* Sanson, *Buffelus antiquus* Duv. Pleistocene (lower or middle paleolithic).

[DOUMERGUE, 1927b, reported *E. grandi* fr. this cave. The trivial name, otherwise unknown to us, is probably an error for *granti* supra.

Author's separates paged 1-11: we have not seen the original volume, neither do we know the original pagination.] [*Anthropologie*, 31: 370.]

JOLEAUD, L. (*contd.*)

- 1918 (1917). Les gazelles pliocènes et quaternaires de l'Algérie. *Bull. Soc. géol. Fr.*, Paris, (4) 17: 208-225, table of distribution.

A critical revision of POMEL, 1895, q.v. *G. thomasi* Pom. (= *G. atlantica* P. Thom. non Bourg.) = *G. dorcas* L.; *G. subgazella* Pom. = *G. dorcas* L.; *Dorcas kevella*, *D. subkevella* Pom., *D. setifensis* Pom. = *G. cuvieri* Ogilby; *G. atlantica* Bourg., *G. nodicornis* Pom. = *G. isabella* Gray; *Dorcas oranensis* Pom. = *G. rufifrons* var. *rufina* O. Thomas; *G. crassicornis* Pom., *G. massaessilia* Pom. = *G. dama* Pallas; *Antilope* cf. *leporina* Pom. (DOUMERGUE, 1907, q.v.) = *Gazella* sp. (?) aff. *granti* Brooke; *Gazella triquetricornis* Pom. is only one of P.'s spp. not referable to a living N.W. Afr. sp.; *Antilope* (*Grimmia*) *leporina* Pom. may be referable to *Lithocranius*.

Horn-core fig. by Bourguignat taken as type [LECTOTYPE] of *G. atlantica* Bourg., 1870.

[*Anthropologie*, 31: 369.]

- 1918a. Études de géographie zoologique sur la Berbérie. Les rongeurs.—I. Les sciuridés. *Bull. Soc. zool. Fr.*, Paris, 43: 83-102, 2 figs.

Past and present history of N.W. African fauna. Long lists of recent and extinct spp., the latter based on rock engravings.

- 1918b. Études de géographie zoologique sur la Berbérie.—II. Les bovinés. *Rev. Africaine*, Alger, 59: 33-38, 3 figs.

[*Bos primigenius mauritanicus* Thomas, *B. brachyceros ibericus* Sanson, *Buffelus antiquus* Duvernoy. *Anthropologie*, 31: 371-372.]

- 1918c. Études de géographie zoologique sur la Berbérie.—III. Les hippotraginés. *Bull. Soc. Géogr. Oran*, 38: 57-86, 9 figs.

Oryx leucoryx.

Villafranchian: Mansourah, nr. Constantine.

Quaternary: Taza, Morocco.

History of *Oryx* and *Addax* from Roman times to the present.

Hippotraginae, of Indian origin, migrated into Europe and Africa during Upper Miocene and Pliocene.

- 1918d. Études de géographie zoologique sur la Berbérie.—III. Les hippotraginés. *Bull. Soc. Géogr. Oran*, 38: 89-118, 2 figs.

Oryx leucoryx in Villafranchian and later deposits.

Origin and dispersal of Hippotraginae.

Pleistocene to Recent: neighbourhood of Constantine.

- 1919a. Relations entre les migrations du genre *Hipparion* et les connexions continentales de l'Europe, de l'Afrique et de l'Amérique au Miocène supérieur. *C.R. Acad. Sci. Paris*, 168: 177-179.

European and African spp. most nearly allied to those of E. United States. They migrated from America by way of the Antillean-Mediterranean land-bridge.

- 1919b. Sur les migrations à l'époque néogène des *Hipparion*, des hippotraginés et des tragelaphinés. *C.R. Acad. Sci. Paris*, 168: 310-311.

Hippotragines and, somewhat later, tragelaphines of African origin invaded America by way of the land-bridge across which *Hipparion* invaded Europe and Africa.

Land-bridge, established at the end of the Tortonian, persisted to the beginning of the Pliocene.

- 1919c. Sur les migrations des genres *Hystrix*, *Lepus*, *Anchitherium* et *Mastodon* à l'époque néogène. *C.R. Acad. Sci. Paris*, 168: 412-414.

Further discussion of mammalian migrations across the land-bridge postulated in the two preceding papers.

JOLEAUD, L. (*contd.*)

1919*d*. Les migrations des mammifères Américains et Africains à travers les régions Atlantiques, pendant les temps néogènes. *Rev. gén. Sci. pur. appl.*, Paris, **30**: 704–713.

[Not seen.]

1920*a*. Contribution à l'étude des hippopotames fossiles. *C.R. Soc. géol. Fr.*, Paris, **1920**: 22–23.

Abstract of 1921 (1920).

1920*b*. Études de géographie zoologique sur la Berbérie.—I. Les rongeurs.—II. Les léporidés. *Bull. Soc. zool. Fr.*, Paris, **45**: 106–112.

North African origin of rabbit (*Oryctolagus cuniculus*).

1921 (1920). Contribution à l'étude des hippopotames fossiles. *Bull. Soc. géol. Fr.*, Paris, (4) **20**: 13–26, 1 pl.

Systematic position of *H. hipponensis* Gaudry.

Astian and Villafranchian: Algeria & Egypt.

H. pantanellii sp. nov. for "*H. hipponensis*" Auct.

Upper Pontian: Monte Casino, Italy [p. 18].

Origin, evolution, distribution of the genus in time and space.

[Publ. post Dec. 1920.]

1921. Considérations sur le système dentaire des hippopotames. *Bull. Soc. zool. Fr.*, Paris, **46**: 18–22, 1 fig.

General account. Comparison of African spp. (Recent and fossil), with the fossil spp. of India.

1923*a*. Sur les hippopotames subfossiles de Madagascar et sur les connexions récentes de la grande île avec le continent africain. *C.R. Acad. Sci. Paris*, **176**: 117–119.

Hippopotamus hipponensis Gaudry.

Astian: Wadi Natrûn, Egypt.

Villafranchian: Duvivier and Saint-Arnaud (Constantine).

H. amphibius not older than Villafranchian (Omo, Ethiopia): *H. major* Owen, *robustus*, *Fraas*, *sirensis*, *icosiensis* Pomel, *annectens*, *minor* Falconer, *pentlandi* Meyer, *melitensis* Forsyth Major "sont tout au plus des variétés à caractère surtout géographique . . .".

1923*b*. Considérations sur l'origine des bœufs, des chevaux, et des chameaux domestiqués dans l'Afrique du Nord. *Anthropologie*, Paris, **33**: 178–181.

Camel widely distributed in Algeria during palaeolithic and neolithic times.

1924. Études de géographie zoologique sur la Berbérie. Les rongeurs. III. Les ctenodactylinés. *Bull. Soc. Hist. nat. Afr. N.*, Alger, **15**: 59–67, 2 maps.

Ctenodactylinae invaded Africa from S. America at the close of Eocene times.

1926*a*. Les vestiges des anciennes associations biologiques de la Berbérie. *C.R. Congr. Intern. Géogr.*, Le Caire, **4**: 128–134.

The three Recent biotopes *Chamaerops* scrub, *Argania* forests, *Acacia* savannahs, with their associated faunas, represent a Tertiary environment contrasting with the different types developed in Quaternary times.

1926*b*. Études de géographie zoologique sur la Berbérie [les ruminants cervicornes]. *Glasn. hrv. prirodosl. Dr.*, Zagreb, **37–38**: 263–322, 1 pl., 8 text-figs.

Cervus elaphus barbarus Bennet, *C. (Dama) dama* Linné, *C. (Megaceroides) algericus* Lydekker, *Libytherium maurusium* Pomel, *Helladotherium* sp., *Camelopardalis giraffa* Linné.

JOLEAUD, L. (*contd.*)

Distribution in time and space.

[Often quoted as "Festschr. für Kramberger". Date of publication usually stated as above, but "1925-26" on t.p. A note, "Ultima imprimatio die XXX decembris MCMXXVI data est", faces pl. 1. Received in B.M.N.H. 4 May 1927.]

- 1927a. Remarques sur la zoogéographie de l'Algérie orientale. *C.R. Soc. Biogéogr.*, Paris, 4, 26: 5-8.

Tertiary mammals of African type:

STAMPIAN-BURDIGALIAN contains *Moeritherium*, *Mastodon*.

SARMATIAN-PONTIAN contains *Hipparion*, *Helladotherium*, *Mastodon* in region of Constantine: farther south *Dinotherium* and *Mastodon*, associated with Indian genera *Merycopotamus*, *Hemitragus*, *Semnopithecus*.

OLDER PLIOCENE contains *Hipparion*, *Hippopotamus*, *Sus phacochoeroides*, *Libytherium*.

- 1927b. Études de géographie zoologique sur la Berbérie: Le mouflon à manchettes. *C.R. Soc. Biogéogr.*, Paris, 4, 27: 43-45.

Past and present distribution of *Ammotragus lervia*.

- 1927c. Études de géographie zoologique sur la Berbérie. Les insectivores. *C.R. Ass. franç. Av. Sci.*, Paris, 51: 523-526.

Present distribution of *Elephantulus*, *Crocidura*, *Erinaceus*. No fossils.

- 1927d. Constantine et l'Algérie orientale. *Géographie physique, géologie, biogéographie*. 136 pp., 1 pl., 8 text-figs., Constantine.

[Not seen: *teste* ARAMBOURG 1938a. Ref. in ARAMBOURG, 1947a to "Assoc. franç. Av. Sci. Congr. Constantine", is not to the *Comptes Rendus* of that meeting.]

- 1928a. Éléphants et dinotheriums pliocènes de l'Éthiopie: contribution à l'étude paléogéographique des proboscidiens africains. *XIV Int. geol. Congr.*, Madrid, 3: 1001-1007, 3 pls.

Elephas planifrons [= *E. recki* Dietr.], *Dinotherium giganteum* [= *D. bozasi* Aramb.], addnl. descr. and figs.

Survival of these and other spp. in Africa.

Pliocene (Astian): Omo Valley, Abyssinia.

- 1928b. Le mouflon à manchettes. *Mém. Soc. Biogéogr.*, Paris, 2: 35-37.

Ammotragus lervia, distr. in space and time.

1929. Études de géographie zoologique sur la Berbérie. Les ruminants.—V. Les gazelles. *Bull. Soc. zool. Fr.*, Paris, 54: 438-457.

Gazella dorcas cabrerai **nom. nov.** pro. *G.d. massaesyala* Cabrera *non* Pomel.

Distribution in space and time, and synonymy of:

Gazella dorcas L. = *G. atlantica* Bourg., *G. thomasi* Pomel (= *G. atlantica* P. Thomas *non* Bourg.), *G. subgazella* Pomel, *G. nodicornis* Pomel.

G. cuvieri Ogilby = *G. setifensis* Pomel, *G. subkevella* Pomel, ["Gazelle de montagne" of vernacular lists].

G. leptoceros F. Cuvier. Not present in Algerian Quaternary.

G. rufifrons Gray = *G. rufina* O. Thomas, *G. pallaryi* Pomel, *G. oranensis* Pomel.

G. dama Pallas = *G. crassicornis* Pomel, *G. massoessilia* Pomel. [Note spelling above!]

1930. On the "pachygenes" or "pachygnathes" (thick-jawed Quaternary deer from Africa and Asia). *Bull. geol. Soc. China*, Peiping, 9: 195-203.

Review and discussion of previous work on *Megaceroides algericus* (Lydekker), and comparison with thick-jawed deer found in the Pleistocene of China.

JOLEAUD, L. (*contd.*)

1931. Études de géographie zoologique sur la Berbérie. Les périssodactyles—I. Les rhinocéros. *Arch. zool. ital. Torino*, **16**: 680–686.

Rhinoceros mauritanicus Pom., *R. subinermis* Pom., distr. in space and time. Former and present distr. of *R. sinuatus*.

- 1932 (1931). À propos de la persistance tardive du *Dinotherium* et de la très grande ancienneté d'outillage et des restes d'*Homo sapiens* dans l'Afrique orientale. *C.R. Soc. géol. Fr.*, Paris, **1931**: 275–276.

Discussion of recent work at Olduvai.

- 1932a. Études de géographie zoologique sur la Berbérie. Les proboscidiens.—I. L'éléphant d'Afrique. *Bull. Soc. zool. Fr.*, Paris, **56**: 483–499.

Distribution in space and time. All the fossils date from the neo-Pleistocene or Holocene.

- 1932b. Sur les nouvelles découvertes d'ethnologie préhistorique en Afrique orientale. *Anthropologie*, Paris, **42**: 673–675.

General review and discussion of the work of L. S. B. Leakey and others.

- 1933 (1930). Chronologie des phénomènes quaternaires, des faunes de mammifères et des civilisations préhistoriques de l'Afrique du Nord. *V Congr. intern. Archéol.*, Alger, pp. 13–46.

[Not seen: *teste* BLONDEL, p. 123.]

- 1933 (1931). L'Éléphant de Berbérie. *C.R. Ass. franç. Av. Sci.*, Paris, **55**: 478–482.

History of *E. africanus* in Morocco, Algeria, and Tunisia. "Toutes les formations . . . géologiques où ont été rencontrées des dents d'Éléphants d'Afrique en Algérie et au Maroc . . . datent . . . du Néopliocène."

" . . . c'est seulement lors du développement de la civilisation néolithique en Berbérie que l'Éléphant d'Afrique devint commun dans le Sud oranais et le Sahara central . . . "

[Volume dated 1931: recd. in B.M.N.H. 5 December 1933.]

- 1933a. Un nouveau genre d'équidé quaternaire de l'Omo (Abyssinie): *Libyhipparion ethiopicum*. *C.R. Soc. géol. Fr.*, Paris, **1933**: 13–14.

Libyhipparion ethiopicum gen. et sp. nov., *L. ? libycum* (Pomel) = *Hipparion massaesilium* Pomel, *Stylohipparion steytleri* van Hoepen referred to *Libyhipparion*, *S. hipkinsi*—genotype of *S.*—referred to *Hipparion* [thus making *S.* a synonym of *H.*]

Older quaternary.

[Publ. end January; 1933b publ. post Sept. 1933.]

- 1933b. Un nouveau genre d'équidé quaternaire de l'Omo (Abyssinie): *Libyhipparion ethiopicum*. *Bull. Soc. géol. Fr.*, Paris, (5) **3**: 7–28, 1 pl.

A greatly amplified version of 1933a, q.v. *L. ethiopicum* Joleaud, 1933, compared with *L. ? libycum* (Pomel), *Stylohipparion ? thomasi* sp. nov. [= *Hipparion gracile* Kaup, THOMAS, 1884a, q.v.], *S. hipkini* van Hoepen, *S. steytleri* van Hoepen, *Notohipparion namaquense* Haughton, *Hipparion albertensis* Hopwood, and various other African, European, and Asiatic equines. *Hippotigris* sp. fig. and descr.

Lower or Middle Quaternary.

- 1933c. Le pliocène récent et le postpliocène de Bône et d'autres localités du littoral Algérien. *C.R. Ass. franç. Av. Sci.*, Paris, **57**: 244–245.

Hippopotamus hippopotamus Gaudry.

Late Pliocene (Upper Villafranchian): Pont-de-Duvivier, valley of the Seybouse.

JOLEAUD, L. (*contd.*)

1933*d*. Études de géographie zoologique sur la Berbérie. Les ruminants. VI.—Les ovins et les caprins. *C.R. Ass. franç. Av. Sci.*, Paris, **57**: 488–492.

Ovis aries africana Sanson in quaternary deposits with cultures ranging from chellean to capsian.

Pelorovis oldowayensis Reck an African ovicaprine nearer sheep than goat.

Capra promaza Pomel = *C. hircus*.

Goats first appear in association with late palaeolithic and mesolithic cultures.

1933*e*. Bœufs, moutons et chèvres sauvages de Berbérie aux temps préhistoriques et historiques. *Terre et la Vie*, Paris, **3**: 579–585, 6 figs.

Semi-popular review with reference to rock engravings and domestication.

Upper Pleistocene onward: various localities.

1933*f*. Chronologie des phénomènes quaternaires des faunes de mammifères et des civilisations préhistoriques de l'Afrique du Nord. *V Congr. intern. Archéol.*, Alger, **1930**: 1–34.

[Not seen.]

1933*g*. Études de géographie zoologique sur la Berbérie.—Les pachydermes. I. Les sangliers et les phacochères. *Rev. Géogr. maroc.*, Rabat, **17**: 177–192.

Distribution in time and space.

Sus scrofa barbarus, *S. algeriensis*, *S. phacochoeroides*, *S. limnetes*, *Phacochoerus mauritanicus*, *P. barbarus*, *P. aethiopicus*, *P. africanus*.

1933*h*. Progrès récents de nos connaissances sur la géologie du Quaternaire et sur la préhistoire de l'Égypte. *Rev. gén. Sci. pur. appl.*, Paris, **44**, pp. 601–608.

1. *Elephas meridionalis*, [*Hippopotamus*, *Giraffa*], *Tragelaphus*.

Upper Villafranchian: Khartoum.

2. *Equus sivalensis*, *Cervus* sp., *Bos* sp.

Lower post-Pliocene or St. Prestian: Wadi Halfa.

3. *Equus sivalensis*, *Sus*. cf. *hysudricus*, *Hippopotamus* (*Hexaprotodon*) cf. *sivalensis*, *Camelus* sp., *Cervus* sp., *Bos* (*Bibos*) cf. *sivalensis*.

St. Prestian: tomb at Antaeopolis, S. of Assiût, Upper Egypt.

4. [Large *Bubalus*, small *Bos*., *Hippopotamus*, small *Equus*, *Felis leo*].

About 14,000 B.C.: Sebil, N. of Kom Ombo.

5. [Large *Bubalus*, *Hippopotamus*, *Equus* sp., *Alcelaphus bubalis*, *Sus*, *Gazella*].

About 14,000 B.C. (deposit analogous to those of Kom Ombo): found in dynastic cemeteries, Assiût (Quau).

1934 (1931*a*). Études de géographie zoologique.—Les Primates, le magot. *C.R. Congr. intern. Géogr.*, Paris, **2**: 851–863.

[Not seen: *teste* *C.R. Soc. géol. Fr.*, **1934**: 133.]

1934 (1931*b*). Succession des faunes de mammifères quaternaires en Berbérie. *C.R. X Congr. préhist. Fr.*, Paris: 245–260.

[Not seen: *teste* BLONDEL.]

1934*a*. Vertébrés subfossiles de l'Azaoua (Colonie du Niger). *C.R. Acad. Sci. Paris*, **198**: 599–601.

Hippopotamus amphibius, *Phacochoerus aethiopicus*, *Elephas africanus*, *Camelopardalis giraffa*, *Bos*. sp., *Antilope* sp., associated with neolithic culture.

934*b*. Equidé quaternaire des salines de Taodenni (Sahara soudanais). *C.R. Soc. géol. Fr.*, Paris, **1934**: 179–180.

Hippotigris sp. cf. *Equus mauritanicus* Pomel, descr. of teeth.

"antérieur au Néolithique récent et sans doute même au Néolithique ancien."

JOLEAUD, L. (*contd.*)

1934c. Considérations générales sur la faune des mammifères du Maroc. *Terre et la Vie*, Paris, 4: 259–271, 10 figs. and maps.

Discussion of Recent and Quaternary faunas. Of 40 spp. of Quaternary mammals, 25 are of African origin, 10 European, 5 circum-Mediterranean; approximately the same proportions as in the Recent fauna.

1935a. Les ruminants cervicornes d'Afrique. *Mém. Inst. Égypte*, Le Caire, 27: 1–85, 40 figs.

Distribution, migrations, and affinities of *Cervus elaphus barbarus* Benn., *C. (Megaceroides) algericus* Lyd., *C. (Dama) dama schaeferi* Hilz.

Quaternary to Recent.

Detailed discussion of the status of the fallow deer in Egypt during historic times.

1935b. Gisements de vertébrés quaternaires du Sahara. *Bull. Soc. Hist. nat. Afr. N.*, Alger, 26 bis: 23–39.

[*id. ac.* 1936c q.v.]

1936 (1933). Essai stratigraphique sur les faunes de mammifères quaternaires et leur relation avec les hommes fossiles du Sahara. *XVI Int. geol. Congr.*, Washington, 2: 789–797.

Succession of mammalian faunas thus:

1. *Hippopotamus*, Pre-chellean→typical capsian.
2. *Bubalus antiquus*, end of mesolithic→beginning of neolithic.
3. African elephant, neolithic proper.
4. Horse, follows Saharan neolithic and continues to a little after the beginning of the Christian era.
5. Camel, posterior to beginning of the Christian era.

1936a. Singes anthropoïdes fossiles. Découvertes d'espèces nouvelles en Asie et en Afrique. *Nature, Paris*, 1936: 347–350, 4 figs.

Semi-popular account referring to FOURTAU, 1919; HOPWOOD, 1933b; SCHLOSSER, 1910; qq.v.

1936b. Évolution géographique de la faune des mammifères du Sahara central pendant la période actuelle de dessèchement. *C.R. Soc. Biogéogr.*, Paris, 13: 21–23.

Giraffa camelopardalis, *Libytherium maurusium* disappeared at end of lower paleolithic cultures (chelleo-acheulian) in Barbary.

Elephas atlanticus, *Rhinoceros mercki*, *Hippopotamus amphibius*, *Oryx tao*, *Buffelus antiquus*, *Taurotragus oryx*, and *Gazella crassicornis* considerably reduced in numbers or disappeared by end of middle palaeolithic (mousterian) in Barbary.

Phacochoerus africanus, *Connochoetes gnu*, *Hippotragus equinus*, *Lycaon pictus* reduced or disappeared after upper palaeolithic or mesolithic in Barbary.

Many spp. persisted to later date in Tripolitania and central Sahara thus—

1. 2000–1500 B.C., disappearance of hippopotamus, rhinoceros, buffalo.
2. 1500–500 B.C., disappearance of giraffe.
3. 500–300 B.C., disappearance of elephant, ox, horse.

1936c. Gisements de vertébrés quaternaires du Sahara. *Bull. Soc. Hist. nat. Afr. N.*, Alger, 26 bis: 23–39.

Review and faunal lists of various localities as under:

ERG DE TIHOHAÏDIN. *Elephas* cf. *antiquus*, *Hippopotamus*, Bovidae, antelopes.

OUNIANGA KEBIR. *Elephas* sp., *Hippopotamus amphibius* L., *Sus scrofa* L.—giant form.

TAODENNI. *Hippotigris* sp. cf. *Equus mauritanicus* Pomel.

JOLEAUD, L. (*contd.*)

SOUNFAT. *Hippopotamus amphibius* L., *Phacochoerus africanus* Gmel., *Rhinoceros* sp., *Gazella dorcas* L.

ASSELAR. Gazelles, antelopes, warthogs.

SILET. Bovine, buffalo, gazelle, *Thryonomys logani* Romer & Nesbit.

CHAD BASIN. Fish, *Trionyx*.

AZAOUA. *Elephas africanus* L., *Hippopotamus amphibius* L., *Phacochoerus africanus* Gmel., *Camelopardalis giraffa* L., *Bos* sp., antilopine.

ARAOUAN. *Bos* aff. *brachyceros* Rüt., *Limnotragus* cf. *gratus* Scl., *Bubalus boselaphus* Pall., *Cervus* sp. (of small size), *Hippopotamus amphibius* L., *Thryonomys* [sic] cf. *calamophagus* de Beerst., *Mellivora* sp., viverrid.

OUALATA. *Elephas africanus* L. (sub-fossil).

[Ref. is to "Volume Jubilaire": date on wrapper 1934, on t.p. 1936.]

1936-7 (1935). Antilopes de savanes du Plio-Quaternaire Nord Africain et antilopes forestières du Quaternaire Saharien. *XII Int. Congr. Zool.*, Lisbon: 1172-1190.

During Quaternary time Barbary inhabited by numerous spp. characteristic of Sudanese savanna, by modern steppe forms, by one genus now restricted to S. and E. Africa (*Connochoetes*) and by one typical of desert regions (*Oryx*).

Earlier workers' names often redetermined.

Antilope tournoueri Ph. Thomas [pars] = *Adenota tournoueri*.

A. tournoueri Ph. Thomas [pars] = *Taurotragus tournoueri*.

Gazella atlantica Bourguignat = *Kobus defassa unctuosus* Laurillard.

Nagor maupasi Pomel = *Redunca redunca maupasi*.

Oegoceros lunata Pomel = *Kobus defassa unctuosus* Laurillard.

Oe. selenocera Pomel = *K.d. unctuosus* Laurillard.

Oe. troglodytorum Pomel = *Redunca redunca troglodytorum*.

Oreas brevicornis Pomel = *Taurotragus derbyi brevicornis*.

O. procanna Pomel = *T.d. procanna*.

Oryx troglodytorum Pomel = *Redunca redunca troglodytorum*.

Palaeoreas gaudryi Ph. Thomas = *Taurotragus gaudryi*.

1937. Remarques sur les Giraffidés fossiles d'Afrique. *Mammalia*, Paris, 1: 85-96, 3 figs.

General review and discussion of taxonomic problems.

Helladotherium duvernoyi Gaudry.

Pontian: Smendou, nr. Constantine; Douaria, W. of Bizerta.

Achtiaria coelophrys Rodl. & Weith.

Pontian: Bou Hanifa, nr. Mascara.

Libytherium maurusium.

Pleistocene (Monastirian): Chaachas (Tebessa, S. of Constantine); Egypt.

Griquattherium cingulatum Haughton.

Vaal River Gravels: S. Africa.

Okapia.

Recent: Congo forests.

Giraffa.

Post-Pliocene to Recent.

JOLEAUD, L., & LOMBARD, J., 1933. Mammifères quaternaires d'Ounianga Kebir (Tibesti sud-oriental). *C.R. Acad. Sci. Paris*, 196: 497-499.

Hippopotamus amphibius L., *Elephas* sp., *Sus scrofa* L.

Lower Quaternary: 19° 03' N., 20° 29' E.

JOLEAUD, L., & LOMBARD, J. (*contd.*)

1934 (1933). Conditions de fossilisation et de gisement des mammifères quaternaires d'Ounianga Kebir (Tibesti sud-oriental). *Bull. Soc. géol. Fr.*, Paris, (5) 3: 239-243, map.

Distribution of *Sus scrofa* group in Africa.

[Publ. end Jan. 1934.]

1935. Dents fossiles d'Éléphant d'Afrique provenant du Moyen-Congo et de l'Oubangui-Chari. *C.R. Soc. géol. Fr.*, Paris, 1935: 96-98.

1. Age unknown: 8 km. S. of Loudima, French Congo.

2. Two teeth of a small race.

"pas plus anciennes que le milieu du Pléistocène."

R. Nongo, 50 km. E.N.E. of Alindao (Oubangui Chari).

JOLEAUD, L., & MALAVOY, J., 1931. Découverte d'une dent subfossile d'*Elephas africanus* dans le Sahara sud-occidental. *C.R. Soc. géol. Fr.*, Paris, 1931: 118-119.

"[Trouvée] dans l'erg, entre Dhar Tichit et Oualata (Mauritanie saharienne)."

JOLEAUD, L., & MENCHIKOFF, N., 1934. Gisements de mammifères et de mollusques quaternaires du Tanezrouft au Nord-Ouest de l'adras des Iforas (Sahara soudanais). *C.R. Soc. géol. Fr.*, Paris, 1934: 213-215.

Hippopotamus amphibius L., *Phacochoerus africanus* Gmel., *Rhinoceros* sp., *Gazella dorcas* L., associated with the extinct terrestrial pulmonate *Limicolaria chudeaui* Germ. and many freshwater spp.

Upper Quaternary: about 10 km. N. of Sounfat (21° N., 0° 35' E.).

JOLEAUD, L., & ROUBAULT, M., 1936. Sur la découverte d'une molaire d'éléphant d'Afrique au Nord Ouest d'Oued el Aneb (Massif de l'Edough, Algérie). *C.R. Soc. géol. Fr.*, Paris, 1936: 207.

"Quaternaire récent (Néolithique s.l.)."

JONES, F. WOOD, 1947. The *Plesianthropus* skull. *Nature, London*, 159: 883.

Brief comment on BROOM & ROBINSON, 1947a.

JONES, T. R., 1937 (1936). A new fossil primate from Sterkfontein, Krugersdorp, Transvaal, S. Afr. J. Sci., Johannesburg, 33: 709-728, 4 figs.

Parapapio broomi gen. et sp. nov., compared with *Papio porcarius*, *P. izodi*, *P. africanus*.

KÄELIN, J., 1949a. Ueber *Paranthropus robustus* Broom. *Arch. Klaus-Stift. Vererb.-Forsch.*, 24: 162-187, 2 pls., 8 text-figs.

[Not seen: summary, *Anthropologie*, 55: 319.]

1949b. Zur vergleichenden Morphologie und stammesgeschichtlichen Bedeutung von *Paranthropus robustus* Broom. *Rev. Suisse Zool.*, Genève, 56: 355-359.

Critical study of a plaster cast of the type specimen.

KEITH, A., 1925a. The fossil anthropoid ape from Taungs. *Nature, London*, 115: 234-235.

[One of a series of notes by various authors under the one general title.

See also DUCKWORTH, 1925; SMITH, G. E., 1925; WOODWARD, 1925.]

1925b. The Taungs skull. *Nature, London*, 116: 11.

Discussion of DART, 1925a. "At the most it [i.e. *Australopithecus*] represents a genus in the Chimpanzee-Gorilla group."

1925c. The Taungs skull. *Nature, London*, 116: 462-463.

Reply to DART, 1925b.

1941. Hand of the Sterkfontein ape. *Nature, London*, 147: 146.

Os magnum found at Sterkfontein (BROOM, 1941b) is prehistoric Bushman.

KEITH, A. (*contd.*)

1947. Australopithecinae or Dartians. *Nature, London*, **159**: 377.

"Dartian" as a popular substitute for "australopithecine". Australopithecinae in or near the human lineage.

KEITH, A., SMITH, G. E., WOODWARD, A. S., DUCKWORTH, W. L. H., 1925. *Nature, London*, **115**: 234-236.

[See individual authors under "The fossil anthropoid ape from Taungs."]

KELLOG, R., 1928. The history of whales—their adaptation to life in the water. *Quart. Rev. Biol.*, Baltimore, **3**: 29-76, 174-208, 24 figs.

A general review.

Pappocetus lugardi Andrews, *Protocetus atavus* Fraas, *Prozeuglodon atrox* Andrews, "*Zeuglodon*" *isis* Andrews, "*Z*" *osiris* Dames, "*Z*" *intermedius* Dart, *Prozeuglodon stromeri* **nom. nov.** pro *Zeuglodon osiris* Stromer, 1908: p. 110, pl. 4 [on p. 37 = **n. et f.**, on p. 40 = **n. et locus**, on p. 48 = **n. et f.**]

1936. A review of the Archaeoceti. *Publ. Carneg. Instn.*, Washington, **482**: xvi + 366, 37 pls., 88 text-figs.

Prozeuglodon isis (Andrews) = *Prozeuglodon atrox* Andrews, *Dorudon osiris* (Dames), *D. stromeri* (Kellogg) = *Zeuglodon osiris* Stromer in part, *D. zitteli* (Stromer), *D. elliotsmithi* (Dart) = *Zeuglodon osiris* G. E. Smith, *D. sensitivus* (Dart), *D. intermedius* (Dart) = *Zeuglodon osiris* Stromer in part, *Eocetus schweinfurthi* (Fraas) = *Zeuglodon macrospondylus* Stromer, *Protocetus atavus* Fraas.

Eocene: Egypt.

"*Zeuglodon*" *cf. brachyspondylus* Stromer.

Eocene: Fayûm, Egypt.

Pappocetus lugardi Andrews.

Middle Eocene: Ameki, Ombialla District, S. Nigeria.

KENT, P. E., 1941a. Miocene deposits in Kenya. *Nature, London*, **148**: 169.

Miocene fossils from Koru are contemporary with the beds in which they are found.

1941b. The recent history and Pleistocene deposits of the plateau north of Lake Eyasi, Tanganyika. *Geol. Mag.*, London, **78**: 173-184, 2 figs.

Preliminary faunal list by HOPWOOD:

Cercocebus ado Hopw., *Elephas antiquus recki* Dietrich, *E. aff. planifrons* Falc. & Cautl., *Deinotherium bozasi* Aramb., *Sivatherium* sp., *Giraffa* sp., *Hipparion* sp., *Equus* sp., *Rhinoceros simus* Burch., *cf. Metridiochoerus* sp., antelopes.

Lower or Middle Pleistocene: Laetolil.

1942a. A note on Pleistocene deposits near Lake Manyara, Tanganyika. *Geol. Mag.*, London, **79**: 72-77, map.

Elephas, *Hipparion*, *Equus*, *Rhinoceros simus*, *Phacochoerus*, antelopes, *Giraffa*, *Hippopotamus*.

Middle Pleistocene: Mkujuni valley, Manyara basin.

1942b. The Pleistocene beds of Kanam and Kanjera, Kavirondo, Kenya. *Geol. Mag.*, London, **79**: 117-132, 4 maps.

1. *Lepus* sp., ?*Crocota crocota* Erxl., *Stegodon kaisensis* Hopw., ?*Pentalophodon* sp., ?*Archidiskodon* sp., *Deinotherium* sp., *Stylohipparion* sp., *Equus oldowayensis* Hopw., *Ceratotherium simum* (Burch.), *Diceros bicornis* (L.), *Koiropotamus majus* Hopw., *Hippopotamus imaguncula* Hopw., antelopes.

Lower Pleistocene; Kanam beds.

KENT, P. E. (*contd.*)

2. ?*Simopithecus* sp., *Elephas antiquus recki* Dietr., *Ceratotherium simum* (Burch.), rhinoceros indet., ?*Taurotragus oryx* Pallas, ?*Redunca* sp., *Giraffa* cf. *capensis* Geoffr., *Giraffa* sp., *Sivatherium olduvaiensis* (Hopw.), *Notochoerus dietrichi* Hopw., pig indet., *Koiropotamus majus* Hopw., *Hippopotamus gorgops* Dietr., *H. imaguncula* Hopw.

Transitional Lower to Middle Pleistocene; Rawe beds.

3. *Simopithecus oswaldi* Andrews, *Lepus* sp., *Orycteropus* sp., *Elephas antiquus recki* Dietr., *Stylohipparion* sp., *Equus* sp., *Ceratotherium simum* (Burch.), *Bularchus arok* Hopw., ?*Alcelaphus kattwinkeli* Schwarz, *Gazella* sp., *Phenacotragus recki* Schwarz, *Hippotragus equinus* Geoffr., *Tragelaphus* sp., *Giraffa* sp., ?*Hylochoerus* sp., *Koiropotamus* cf. *choeropotamus* Desm., *Notochoerus dietrichi* Hopw., *Hippopotamus gorgops* Dietr.

Middle Pleistocene; Kanjera beds.

Lists based on identifications by HOPWOOD.

1944. The Miocene beds of Kavirondo, Kenya. *Quart. J. Geol. Soc. London*, **100**: 85-116, 8 figs.

Preliminary faunal list only.

KERN, H. M., JR., & STRAUS, W. L., JR., 1949. The femur of *Plesianthropus transvaalensis*. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) **7**: 53-77, 5 figs.

Detailed discussion based on LE GROS CLARK, 1947b.

"... it cannot be said to be more hominid than cercopithecoid, nor ... more ... erect, bipedal ... than ... pronograde, quadrupedal ... " [*Anthropologie*, **55**: 318-321.]

KITCHING, J., WELLS, L. H., & WESTPHAL, E., 1948. Fossil cercopithecoid primates from the Limeworks Quarry, Makapansgat, Potgietersrust. *S. Afr. Sci.*, Johannesburg, **1**: 171-172.

Additional material of cf. *Papio darti* Br. & J., *Parapapio broomi* Jones, cf. *Parapapio jonesi* Broom.

KOENIGSWALD, G. H. R. VON, 1939. Neue Menschenaffen- und Vormenschenfunde. *Naturwissenschaften*, Berlin, **27**: 617-622, 4 figs.

A general review; brief comments on *Proconsul*, *Australopithecus*, *Plesianthropus*, *Paranthropus*.

1942. The South African man-apes and *Pithecanthropus*. *Publ. Carneg. Instn.*, Washington, **530**: 206-222, 10 pls., 6 text-figs.

Australopithecus africanus, *Paranthropus robustus*, and *Plesianthropus transvaalensis* compared with *Pithecanthropus*, *Sinanthropus*, *Homo*; discussion of systematic position.

1948a. Ein *Hyaenaelurus* aus dem Miocaen Nordafrikas. *Ecl. geol. Helv.*, Lausanne, **40**: 292-294, 1 fig.

Hyaenaelurus fourtaui sp. nov. The genus is probably one of the Felidae and of African origin.

Lower Miocene (Burdigalian): Moghara, Egypt.

1948b. Remarks on the lower canine of *Plesianthropus transvaalensis* Broom. *Roy. Soc. S. Afr., Spec. Publ.*, Robert Broom commem. vol.: 159-164, 1 fig.

Evolutionary trend differs from that of early hominids. Detailed comparison with many other genera.

KOHL-LARSEN, L., 1940. Die Fundstätte des *Africanthropus*. *Natur und Volk*, Frankfurt a.M., **70**: 487-499, 550-556, 1 pl. [on p. 1 of wrapper of Hft. 10], 19 text-figs.

Semi-popular. *Rhinoceros* (*Ceratotherium*) *simum*, *Gorgon taurinus* figs. only.

[See RECK & KOHL-LARSEN, 1936.]

See also RECK & KOHL-LARSEN.

KOHLBRÜGGE, J. H. F., 1891. Versuch einer Anatomie des Genus *Hylobates*. In Weber, *Zool. Ergebn. Reise niederl. Ost.-Ind.*, Leiden, 1: 210-354, 3 pls., 24 text-figs.; 2: 139-208, 1 pl., 2 text-figs.

Soft anatomy in the main, but with sections on teeth, vertebral column, carpalia, tarsalia. [Valuable in the study of *Limnopithecus* spp.]

KRETZOI, N., 1929. Materialien zur phylogenetischen Klassifikation der Aeluroïden. *X Int. Zool. Congr.*, Budapest: 1293-1355.

Afrosmilus gen. nov. for *Pseudaelurus africanus* Andrews, 1914. *Leo* Oken revived for *Felis leo* L.

[A complete taxonomic revision that has not found general acceptance.]

LAMOTHE, L. DE, 1904. Note sur les relations stratigraphiques qui paraissent exister entre les anciennes lignes de rivage de la côte Algérienne et celles signalées sur la côte niçoise. *Bull. Soc. géol. Fr.*, Paris, (4) 4: 14-38, 1 fig.

Correlation of Mediterranean shore-lines.

Elephas iolensis Pomel restricted to levels between sea-level and 15 m. in Tunisia and Algeria.

1907. Le climat de l'Afrique du Nord pendant le Pliocène Supérieur et le Pléistocène. *X Int. géol. Congr.*, Mexico, 1906, 1: 341-347.

Pithecus inuus E. Geoffr. driven to live at high altitudes through human activities.

LANKESTER, E. RAY, 1903. A new extinct monster. *Sphere*, London, 1903: 238, 2 figs.

Arsinoitherium andrewsi sp. nov.

Eocene: Fayûm, Egypt.

[Published 12 Sept. 1903. The figures are of *A. zitteli* Beadnell.

See also ANONYMOUS, 1903; ANDREWS, 1904b.]

LARTET, [E.], 1868. [Lettre . . . relative à . . . deux ossements trouvés dans la Grotte-Pescade.] *Bull. Soc. Climatol. Alger*, 5: 129.

1. Right metatarsal of a fairly large bear.

2. Left metatarsal of a small bear.

Cavern deposits: Grotte-Pescade [= Pointe-Pescade] Algeria.

Mouflon, ox, antelopes, horse, *Rhinoceros mercki*, elephant, hyaena, panther, man.

Grotto of Birmandreis, Algeria.

LAVAUDEN, L., 1926. Les gazelles du Sahara central. *Bull. Soc. Hist. nat. Afr. N.*, Alger, 17: 11-27, 2 pls., 2 text-figs.

G. dorcas (incl. *G. thomasi* Pom., *G. subgazella* Pom.) fossil at Pointe-Pescade, Mustapha, Oran, Bou Zabouin (Ain-Mlila), Taza.

G. cuvieri (incl. *G. kevella*, *G. subkevella*, *G. setifensis* Pom.) fossil at same localities, also in caves and Villafranchian of Constantine.

G. dama (as *G. crassicornis* Pom., *G. massaessilia* Pom.) at Pointe-Pescade, ferruginous breccia of Beni-Saf.

[Recent spp. and sub-spp. revised and distribution discussed.]

See also DEPÉRET, LAVAUDEN, & SOLIGNAC.

LEAKEY, L. S. B., 1931. *The stone age cultures of Kenya Colony*. xiii + 283 pp., 31 pls., 47 text-figs., Cambridge.

Discussion of fauna, pp. 19-26.

[See also HOPWOOD, 1931c.]

LEAKEY, L. S. B. (*contd.*)

1936. A new fossil skull from Eyassi, East Africa. *Nature, London*, **138**: 1082-1084, 3 photos.

Brief account of the associated, Pleistocene, fauna with names in the vernacular.

[*Anthropologie*, **47**: 207.]

1942. Fossil Suidae from Oldoway. *J. E. Afr. Uganda nat. Hist. Soc.*, Nairobi, **16**: 178-196, 3 pls., 2 text-figs.

Mesochcerus olduvaiensis sp. nov., *Potamochoerus majus* (Hopw.), *Notochoerus dietrichi* Hopw., *Afrochoerus nicoli* gen. et sp. nov., *Phacochoerus* cf. *aethiopicus* (Pallas), *Phacochoerus complectidens* sp. nov., *Metridiochoerus* sp., *Sus limnetes* Hopw.

Middle Pleistocene: [Olduvai], Tanganyika Territory. [*Anthropologie*, **51**: 199-200.]

- 1943a. Notes on *Simopithecus oswaldi* Andrews, from the type site. *J. E. Afr. Uganda nat. Hist. Soc.*, Nairobi, **17**: 39-44, 5 pls.

Male and female skull descr. and figd. Juvenile mandible descr. only.

Middle Pleistocene: Kanjera, Homa Mountain, Kenya Colony. [*Anthropologie*, **51**: 200.]

- 1943b. New fossil Suidae from Shungura, Omo. *J. E. Afr. Uganda nat. Hist. Soc.*, Nairobi, **17**: 45-61, 7 pls.

Gerontochoerus scotti gen. et sp. nov., *Pro-notochoerus* [sic] *jacksoni* gen. et sp. nov., *Mesochcerus heseloni* sp. nov., *Sus limnetes* Hopwood.

Lower Pleistocene: Omo Valley, S. Abyssinia.

[*Anthropologie*, **51**: 200.]

- 1943c. A Miocene anthropoid mandible from Rusinga, Kenya. *Nature, London*, **152**: 319-320, 2 photos.

Preliminary account of a mandible of *Proconsul* sp. [See MACINNES, 1943.]

1946. Fossil finds in Kenya. Ape or primitive man? *Antiquity*, Gloucester, **20**: 201-204, 1 pl.

1. *Proconsul*, *Limmopithecus*, *Xenopithecus*.

Lower Miocene: Kenya Colony.

2. Brief faunal list.

Middle Pliocene: Olorgesailie, Kenya Colony.

- 1948a. Skull of *Proconsul* from Rusinga Island. *Nature, London*, **162**: 688, 1 fig. Preliminary announcement.

Miocene: Rusinga Island, Lake Victoria, Kenya.

- 1948b. Fossil and sub-fossil Hominoidea in East Africa. *Roy. Soc. S. Afr., Spec. Publ.*, R. Broom Commem. vol.: pp. 165-170.

Brief general account.

LEAKEY, L. S. B., HOPWOOD, A. T., & RECK, H., 1931. New yields from the Oldoway bone beds, Tanganyika Territory. *Nature, London*, **128**: 1075.

BED No. 1. *Deinotherium* sp., *Hipparion* sp., *Elephas* (*antiquus recki*?).

BED No. 2. *Hipparion*, *E. antiquus recki*.

BED No. 4. *E. antiquus recki*, *Hipparion*, *Pelorovis*, *Hippopotamus gorgops*, *Equus* sp.

Lower and Middle Pleistocene = Kamasian of Kenya.

LECOINTRE, G., 1926. Recherches géologiques dans la meseta marocaine. *Mém. Soc. Sci. nat. Maroc*, Rabat, **14**: 1-158, 18 pls., 32 text-figs., 2 maps.

Elephas antiquus, *Rhinoceros* sp. in 30 m. beach.

Alcelaphus probubalis Pomel sp. in Quaternary, Rabat.

[A detailed geological account with incidental references to these 3 spp.]

LE RICHE, H. See BROOM & LE RICHE.

LEVAILLANT, —, 1844. Sur l'origine des cavernes à ossements. *Bull. Soc. géol. Fr.*, Paris, (2) **1**: 417-419.

Bones of porcupines, goats and jackals.

Cavern near la Calle, Algeria.

LOMBARD, J. See JOLEAUD & LOMBARD.

LÖNNBERG, E., 1933. Description of a fossil buffalo from East Africa. *Ark. Zool.*, Stockholm, **25 A**, 17: 1-32, 3 pls., 2 text-figs.

Bubalus nilssoni sp. nov. Probably related to *B. antiquus* Duvernoy and *B. baini* Seeley. Quaternary lake beds: near R. Malewa, Naivasha Basin, British East Africa [Kenya Colony]. [*N. Jb. Min. Geol. Paläont.*, 1935, Ref. 3: 130.]

1937. On some fossil mammalian remains from East Africa. *Ark. Zool.*, Stockholm, **29 A**, 2: 1-23, 12 figs.

Felis leo bleyenberghi Lönnb., *Bathyleptodon aberrans* gen. et sp. nov., *Proconsuloides naivashae* gen. et sp. nov.

[Pleistocene; late, but exact age uncertain]: about 10 km. S.S.E. of Lake Naivasha and 1-2 km. from road to Nairobi, Kenya Colony.

LOWE, C. VAN RIET, 1938. The Makapan caves. An archaeological note. *S. Afr. J. Sci.*, Johannesburg, **35**: 371-381, 3 figs.

Faunal list of Transvaal caves copied from BROOM, 1937b, q.v.

1945. A geo-archaeological note on Taungs, Kromdraai and Sterkfontein. *SAMAB*, Durban, 3: 309-312.

All three localities "much older than Dr. Broom originally believed". The latest deposit possibly Pliocene.

LYDEKKER, R., 1887. On a molar of a Pliocene type of *Equus* from Nubia. *Quart. J. geol. Soc. London*, **43**: 161-164, 1 fig.

Equus sp. cf. *sivalensis*.

Upper Tertiary [Pleistocene]: Nile Valley at Wadi Halfa.

1890. On a cervine jaw from Algeria. *Proc. zool. Soc. London*, 1890: 602-604, 1 fig.

Cervus algericus sp. nov.

Pleistocene: Hammam Meskoutin, nr. Guelma.

LYLE, A. See DREYER & LYLE.

MACINNES, D. G., 1936. A new genus of fossil deer from the Miocene of Africa. *J. Linn. Soc. (Zool.)*, London, **39**: 521-530, 5 figs.

Climacoceras africanus gen. et sp. nov.

"presumed to be of Miocene age": Kiboko Island, Kavirondo Gulf, Lake Victoria.

[*Proc. Linn. Soc. London*, Sess. 148: 131; *Fortschr. Paläont.*, 1: 328.]

1942. Miocene and post-Miocene Proboscidea from East Africa. *Trans. zool. Soc. London*, **25**: 33-106, 8 pls., 1 map, 4 text-figs.

Deinotherium hopleyi Andrews.

Miocene: Rusinga Island [Lake Victoria], Karungu.

Trilophodon angustidens kisumuensis subsp. nov.

Miocene: Kiboko Island, Rusinga Island, Ombo.

Deinotherium bozasi Arambourg.

? Lower Pleistocene: Kanam East.

Pentalophodon sivalensis kenyensis subsp. nov.

? Lower Pleistocene: Kanam East, Kanam West.

Archidiskodon planifrons nyanzae subsp. nov.

? Lower Pleistocene: Kanam East.

A. p. nyanzae? found at Kanam West.

A. cf. *meridionalis*.

? Lower Pleistocene: Kanam East.

MACINNES, D. G. (*contd.*)

Palaeoloxodon antiquus recki Dietrich.

? Middle Pleistocene: Kanjera.

All the foregoing localities in Kavirondo, Kenya Colony.

Stegodon fuchsi **sp. nov.**

Kaiso series, Lower Pleistocene: Lake Edward, Uganda Protectorate.

1943. Notes on the East African Miocene primates. *J.E. Afr. Uganda nat. Hist. Soc.*, Nairobi, **17**: 141-181, 6 pls.

Progalago dora **gen. et sp. nov.**, *Mesopithecus* Wagner **sp. ?**, *Limnopithecus legetet* Hopwood, *L. evansi* **sp. nov.**, *Xenopithecus koruensis* Hopwood.

Proconsul nearer to the ancestral line of man than to that of the chimpanzee.

Lower Miocene: Rusinga Island and Songhor, Kenya Colony.

[*Anthropologie*, **51**: 200; **52**: 178-179.]

MALAVOY, J. See JOLEAUD & MALAVOY.

MARÇAIS, J., & CHOUBERT, G., 1947. Le Quaternaire des environs de Rabat et l'âge de l'homme fossile de Rabat. *C.R. Acad. Sci. Paris*, **224**: 1645-1647.

Stratigraphical: no faunal list.

MARCHAND, H., 1932. Faune préhistorique de la grotte du Chenoua. *Bull. Soc. Hist. nat. Afr. N.*, Alger, **23**: 73-75.

Bos primigenius (= *Bos opisthonomus*), *Bubalis boselaphus*, *Cervus pachygenis*, *Ammotragus cervia* [sic], one or more horses, one or two gazelles, sheep, *Canis aureus*.

[Age not stated; very late Pleistocene]: Grotte Rolland in the Chenoua massif.

1934a. *Les documents humains de l'escargotière d'Aïn Bahir*. 20 pp., 1 pl., Constantine.

[Equine (*E. asinus*?), bovine, sheep?, *Bubalis bubalis*. *Anthropologie*, **45**: 140.]

1934b. Première campagne de fouilles aux grottes du Cap Ténès. La grotte de la Cale génoise. *Bull. Soc. préhist. franç.*, Paris, **1934**, 4: 8, 2 figs.

["un équidé, l'antilope bubale, la gazelle de montagne, le mouflon, *Bos ibericus*, le chacal." *Anthropologie* **45**: 416-417.]

1935. La grotte basse du phare au Cap Ténès. *Bull. Soc. Géogr. Oran*, **56**: 69-80, 2 pls.

Erinaceus europeus L., *Bos ibericus* Sanson, *Ovis tragelaphus* Desm., *Bubalus boselaphus* Pall., *Gazella cuvieri* Kev., *Ovis africana*, ?*Capra hircus*.

Associated with oranian (= ibero-maurusian) cultures. [*Anthropologie*, **46**: 416-417.]

MARSTON, A. T., 1946. Dr. L. S. B. Leakey's discovery of fossil anthropoid mandibles from the Lower Miocene of Kenya. *Brit. dent. J.*, London, **81**: 316-320.

Affinities of *Proconsul*.

MATSUMOTO, H., 1921. *Megalohyrax* Andrews and *Titanohyrax* g. n.—A revision of the genera of hyracoids from the Fayûm, Egypt. *Proc. zool. Soc. London*, **1921**: 839-850, 6 figs.

Megalohyrax eocaenus Andrews, 1903; *M. minor* Andrews 1904; *M. niloticus* (Schlosser), 1910; *M. suillus* (Schlosser), 1910; *M. pygmaeus* **sp. nov.** = *Saghatherium magnum* Andrews, 1907, not Andrews, 1904. *Titanohyrax* **gen. nov.** for *Megalohyrax palaeotherioides* Schlosser, 1910; *T. ultimus* **sp. nov.**; *T. schlosseri* **nom. nov.** for *Megalohyrax eocaenus* Schlosser, 1911, not Andrew, 1903; *T. palaeotherioides* (Schlosser), 1910; *T. andrewsi* **sp. nov.** = *Megalohyrax minor* Andrews, 1906, in part, not Andrews, 1904.

MATSUMOTO, H. (*contd.*)

1922. Revision of *Palaeomastodon* and *Moeritherium*. *Palaeomastodon intermedius*, and *Phiomia osborni*, new species. *Amer. Mus. Novit.*, New York, **51**: 1-6, 3 figs.

Palaeomastodon intermedius sp. nov., *Phiomia osborni* sp. nov.

Fluvio-marine beds [Lower Oligocene]: Fayûm, Egypt.

1923. A contribution to the knowledge of *Moeritherium*. *Bull. Amer. Mus. nat. Hist.*, New York, **48**: 97-140, 11 figs.

Systematics, palaeobiology, and phylogenetic position of *Moeritherium lyonsi*, *M. gracile*, *M. andrewsi* and *M. trigodon*.

Moeritherium near the ancestry of *Palaeomastodon*, if not directly ancestral.

1924. A revision of *Palaeomastodon* dividing it into two genera, and with descriptions of two new species. *Bull. Amer. Mus. nat. Hist.*, New York, **50**: 1-58, 48 figs.

Palaeomastodon parvus Andrews, *P. intermedius* Matsumoto, *P. beadnelli* Andrews, *Phiomia minor* (Andrews), *Ph. wintoni* (Andrews), *Ph. osborni* Matsumoto.

Fluvio-marine formation [Lower Oligocene]: Fayûm, Egypt.

[For original description of *P. intermedius* and *Ph. osborni* see 1922. No new spp. here *pace* title.]

1926. Contribution to the knowledge of the fossil Hyracoidea of the Fayûm, Egypt, with description of several new species. *Bull. Amer. Mus. nat. Hist.*, New York, **56**: 253-350, 43 figs.

Geniohyus gigas sp. nov., *G. subgigas* sp. nov., *G. mirus* Andrews, *G. micrognathus* Schlosser, *G. diphycus* sp. nov., *G. magnus* (Andrews), *Bunohyrax major* (Andrews), *B. fajumensis* (Andrews), *B. affinis* sp. nov., *Megalohyrax eocaenus* Andrews, *M. minor* Andrews, *M. niloticus* (Schlosser), *M. suillus* (Schlosser), *M. pygmaeus* Matsumoto, *Titanohyrax ultimus* Matsumoto, *T. schlosseri* Matsumoto, *T. palaeotherioides* (Schlosser), *T. andrewsi*, *Pachyhyrax crassidentatus* Schlosser, *Saghatherium macrodon* sp. nov., *S. euryodon* sp. nov., *S. antiquum* Andrews & Beadnell, *S. annectens* sp. nov., *S. sobrina* sp. nov.

Geniohyidae fam. nov., Titanohyracidae fam. nov., Pliohyracidae fam. nov.

MATTHEW, W. D., 1910. Schlosser on Fayûm mammals. *Amer. Nat.*, Boston, **44**: 700-703.

Critical review of SCHLOSSER, 1910.

MAW, G., 1876. *Bos primigenius* in Algeria. *Geol. Mag.*, London, (2) **3**: 48.

Skull and horn cores recorded.

[Pleistocene]: Djelfa, 150 miles S. of Algiers.

MAYET, L. See DEPÉRET & MAYET. See also DEPÉRET, MAYET, & ROMAN.

MENCHIKOFF, N. See JOLEAUD & MENCHIKOFF.

MENNELL, F. P., & CHUBB, E. C., 1907. On an African occurrence of fossil Mammalia associated with stone implements. *Geol. Mag.*, London, (5) **4**: 443-448.

Felis leo Linn., *Felis* spp., *Hyaena* sp., viverrid, *Tatera* sp., *Otomys* sp., *Mus* sp., bathyergid, *Hystrix* sp., *Phacochoerus aethiopicus* Pall., *Elephas africanus* Blumenb., *Diceros whitei* sp. nov., *Equus* sp., *Connochaetes taurinus* Burch., *Strepsiceros strepsiceros* Pall., *Taurotragus oryx* Pall. [Identifications and descr. of n. sp. by CHUBB.]

Broken Hill Mine, abt. 150 miles N. of Kafue River, Rhodesia.

[*Anthropologie*, **19**: 297-298.]

MERCIER, G. See DÉBRUGE & MERCIER.

MERCIER, G., & DÉBRUGE, A., 1913. La station préhistorique de Mechta-Château-dun. *Rec. Not. Mém. Soc. archéol. Constantine*, 46.

[Recent local fauna with *Bos primigenius* and the bubal (*Alcelaphus boselaphus*). *Anthropologie*, 25: 554-555. See also DÉBRUGE & MERCIER, 1914.]

MILNE EDWARDS, H. See EDWARDS, H. MILNE.

MOLLETT, O. D. VAN DER SPUY, 1947. Fossil mammals from the Makapan valley, Potgietersrust. I. Primates. *S. Afr. J. Sci.*, Johannesburg, 43: 295-303, 7 figs.

Parapapio Jones, 1936 redefined; *P. broomi* addnl. descr. and figs., *Cercopithecoides williamsi* gen. et sp. nov.

MORRISON-SCOTT, T. C. S. See ELLERMAN & MORRISON-SCOTT.

MORTON, S. G., 1849. Additional observations on a new species of Hippopotamus. *J. Acad. nat. Sci. Philadelphia*, (N.S.) 1: 231-239, 3 pls.

Letter from Hugh Falconer quoted on 235-237. "*H. annectens*, No. 4, is an undescribed fossil species from the Nile above the Cataracts, which I lately observed in the Frankfort collections, . . . and brought to Europe by Dr. Rüppel in 1827."

MOUTA, F., 1950. Sur la présence du Quaternaire ancien dans les hauts plateaux du Sud de l'Angola (Humpata-Leba). *C.R. Soc. géol. Fr.*, Paris, 1950: 261-262.

Baboon closely related to *Dinopithecus ingens* Broom.

NESBIT, P. H. See ROMER & NESBIT.

NEUVILLE, H. See BOUET & NEUVILLE.

NEUVILLE, R., & RUHLMANN, A., 1941. La place du paléolithique ancien dans le Quaternaire marocain. *Hespéris*, Rabat, 8: 1-156, 8 pls., 49 text-figs.

Correlation of faunas, fluctuations in sea-level, pluvial periods and alpine glaciations. Appendix III, p. 137.

Connochaetes taurinus prognu Pomel, *Hippopotamus amphibius*, *Rhinoceros sinus* or *mercki*, *Rhinoceros mercki* or *etruscus* or *leptorhinus*.

Sidi Abderrahman.

NIÇAISE, C., 1870a. Catalogue des animaux fossiles observés dans les terrains de transition, secondaires, tertiaires et quaternaires de la province d'Alger. *Bull. Soc. Climat., Alger*, 7: 1-136.

Elephas africanus.

Quaternary: mines of the Gourayas, district of Cherchel; left bank of the Harrach, nr. railway station La Maison Carrée; right bank of the Oued K'niss, commune of Hussein Dey.

E. meridionalis.

Quate : under the walls of Cherchel, not far from the Oued R'ha.

Equus fossilis, *Antilope* . . . ?, *Bos primigenius*.

Old travertine of Miliana.

Bos priscus.

Diluvial deposits: neighbourhood of Rouïba, E. part of Algiers.

[The *Bulletin* is most erratic in numbering and pagination, e.g., 7 paged 1-136, 1-16, 153-274! All references need great care.]

1870b. Catalogue des animaux fossiles observés dans les terrains de transition secondaires, tertiaires et quaternaires de la province d'Alger, avec introduction géologique donnant un résumé sur les formations sédimentaires naturelles reconnues jusqu'à ce jour dans cette province. 136 pp., Algiers.

[1870a disguised as a separate publication? Not seen.]

- NILSSON, E., 1932. Quaternary glaciation and pluvial lakes in British East Africa. *Geogr. Ann. Stockholm*, **13**: 249-348, 4 pls., 68 text-figs.
 Preliminary account of a fossil water buffalo [*Bubalus nilssoni* Lönnberg, 1933, q.v.] related to *Bubalus antiquus* Duvernoy and *B. bairdi*.
 Nr. River Malewa, Naivasha Basin.
1945. Om ett fynd av fossil buffel i Ostafrika. *Geol. Fören. Stockholm, Förh.*, **67**: 241-248, 3 figs.
Bubalus nilssoni addnl. figs. and descr.
- O'BRIEN, T. P., 1939. *The Prehistory of Uganda Protectorate*. xii + 319 pp., 26 pls., 56 text-figs, 2 folding tables, map. Cambridge.
 [See HOPWOOD, 1939a.]
- OLLIVIER, E., 1859a. [Notice sur un crâne fossile de buffle.] *C.R. Acad. Sci. Paris*, **48**: 1091.
 Buffalo skull found on left bank of R. Rummel, near the Sétif road, 24 km. S.W. of Constantine. Neither descr. nor fig.
 [Note of presentation to the Academy of 1859b.]
- 1859b. *Note sur un fragment de tête fossile trouvé près de Constantine en Mars 1859*. Constantine.
 [Not seen. Presented to Acad. Sci., Paris, 13 June 1859.]
- OSBORN, H. F., 1906. Milk dentition of the Hyracoid *Saghatherium* from the Upper Eocene of Egypt. *Bull. Amer. Mus. nat. Hist.*, New York, **22**: 263-266, 1 fig.
Saghatherium antiquum Andrews & Beadnell.
 Upper Eocene: Fayûm, Egypt.
 [Specimen in Stuttgart Mus., No. 11579, Coll. Markgraf.]
1907. The Fayûm Expedition of the American Museum. *Science*, New York, (N.S.) **25**: 513-516.
 Popular account: a few generic names mentioned without comment or description.
1908. New fossil mammals from the Fayûm Oligocene, Egypt. *Bull. Amer. Mus. nat. Hist.*, New York, **24**: 265-272, 6 figs.
Ptolemaiidae fam. nov., *Ptolemaia lyonsi* gen. et sp. nov., *Phiomys andrewsi* gen. et sp. nov., *Metaphiomys beadnelli* gen. et sp. nov., *Apidium phiomensis* gen. et sp. nov.
 Fauna of upper fossiliferous level Fluvio-Marine Beds provisionally determined as *Arsinoitherium* sp. indet, *Metaphiomys beadnelli*, *Apidium phiomensis*, *Apterodon macrognathus*, *Ancodon gorringei*, *Ancodon* (?) *minus*, ? *Geniohyus*, *Megalohyrax eocaenus*.
- 1909a. New carnivorous mammals from the Fayûm Oligocene, Egypt. *Bull. Amer. Mus. nat. Hist.*, New York, **26**: 415-424, 9 figs.
Apterodon macrognathus Andrews, *Pterodon africanus* Andrews, *P. leptognathus* sp. nov. *P. phiomensis* sp. nov., *Metasinopa fraasii* gen. et sp. nov., *Hyaenodon brachycephalus* sp. nov.
 [*H. brachycephalus* (p. 424) is the name accompanying the description, but fig. 8, to which the description refers, is labelled *H. brachygnathus*. An erratum slip, missing in some copies, substituted the former for the latter name, and designated the original of figs. 8, 9c, as the type specimen.]
- 1909b. The feeding habits of *Moeritherium* and *Palaeomastodon*. *Nature*, London, **81**: 139-140, 2 figs.
Moeritherium an offshoot slightly nearer to the elephants than to the sirenians.
Palaeomastodon unquestionably in main line of proboscidean descent.

OSBORN, H. F. (*contd.*)

1910. *The age of mammals in Europe, Asia, and North America.* xvii + 635 pp., 220 figs. New York.

Fayûm fauna discussed pp. 199–203. N. African Pleistocene faunas pp. 429–433.

1915. Review of the Pleistocene of Europe, Asia and Northern Africa. *Ann. N.Y. Acad. Sci.*, **26**: 215–315, 20 figs.

Revision, for a projected German edn., of the relevant pp. in 1910, q.v.

1923. Linnean classification and the phylogenetic classification of the Proboscidea. *Palaeontol. Hungarica*, Budapest, **1**: 35–54, 5 figs.

Discussion of the habits of *Moeritherium*, *Phiomia*, *Palaeomastodon*.

1925. Final conclusions on the evolution, phylogeny, and classification of the Proboscidea. *Proc. Amer. phil. Soc.*, Philadelphia, **64**: 17–35, 3 figs.

Moeritherioidea neither migrated from N. Africa, nor left African or European descendants. *Phiomia* indubitably ancestral to the Longirostrinae. *Palaeomastodon* directly ancestral to the true mastodonts, Mastodontinae.

1928. Mammoths and man in the Transvaal. *Nature*, London, **121**: 672–673, 2 figs.

Archidiskodon subplanifrons, **sp. nov.**

Upper (?) Pliocene: Sydney-on-Vaal, Vaal River diggings, South Africa.

Archidiskodon broomi **sp. nov.**

“relatively recent Upper Pleistocene”: “Lower (?) Vaal River gravel terrace”. [No precise locality.] Previous records of fossil proboscideans revised:

Loxodonta griqua Haughton, 1922 = *Archidiskodon griqua*.

Elephas (Loxodon) zulu Scott, 1907 = *Loxodonta (Pilgrimia) antiqua zulu*.

Elephas antiquus recki Dietrich, 1916 = *Loxodonta (Pilgrimia) antiqua recki*.

Elephas aff. meridionalis Hopwood, 1926 = *Archidiskodon meridionalis*.

Archidiskodon transvaalensis Dart, 1927 = *Archidiskodon transvaalensis*.

Archidiskodon sheppardi Dart, 1927 = *Archidiskodon sheppardi*.

Mastodon (Bunolophodon) sp. Beck, 1906 = *Mastodon (Bunolophodon)* sp.

- 1934a. Primitive *Archidiskodon* and *Palaeoloxodon* of South Africa. *Amer. Mus. Novit.*, New York, **741**: 15 pp., 5 figs.

Revision, also distribution in time, of nineteen spp., viz.:

Metarchidiskodon **gen. nov.**, for *Loxodonta griqua* Haughton, 1922; *Archidiskodon subplanifrons* Osborn; *A. proplanifrons* **sp. nov.**, *A. broomi* Osborn; *A. vanalpheni* Dart; *A. loxodontoides* Dart; *A. milletti* Dart; *A. yorki* Dart; *Palaeoloxodon transvaalensis* (Dart); *P. sheppardi* (Dart); *P. andrewsi* (Dart); *P. hanekomi* (Dart); *P. yorki* (Dart); *P. wilmani* (Dart); *P. kuhni* (Dart); *P. archidiskodontoides* (Haughton); *Loxodonta zulu* (Scott); *L. prima* Dart; *L. africana* var. *obliqua* Dart; *L. subantiqua* Haughton.

Pliocene-Recent: Terraces of the Vaal River.

[*N. Jb. Min. Geol. Paläont.*, **1935**, Ref. 3: 121.]

- 1934b. Evolution and geographic distribution of the Proboscidea: Moeritheres, Deinotheres, and Mastodonts. *J. Mammal.*, Baltimore, **15**: 177–184, 3 figs.

Preliminary summary of conclusions set out in detail in 1936, q.v.

1936. *Proboscidea. A monograph of the discovery, evolution, migration and extinction of the mastodonts and the elephants of the world. I. Moeritherioidea, Deinotheroidea, Mastodontoides.* xl + 802 pp., col. frontisp., 12 pls., 680 text-figs. New York, Amer. Mus. Nat. Hist.

Original figs. and descr. reproduced. Addnl. figs. and descr. and critical revision of *Moeritherium lyonsi* Andrews, *M. gracile* Andrews, *M. andrewsi* Schlosser, *M. trigodon*

OSBORN, H. F. (*contd.*)

Andrews, *M. ancestrale* Petronievics, *Deinotherium hopwoodi* **sp. nov.**, *D. hopleyi* Andrews, *Palaeomastodon parvus* Andrews, *P. intermedius* Matsumoto, *P. beadnelli* Andrews, *Phiomia minor* Andrews, *P. serridens* Andrews & Beadnell, *P. wintoni* Andrews, *P. osborni* Matsumoto, *P. pygmaeus* Déperet.

Various horizons and localities.

[The generic references, which are those given by Osborn, are not necessarily those given by the authors of the species. *See also* 1942.]

1938. Eighteen principles of adaptation in alloiometrons and aristogenes. *Palaeobiologica*, Wien, **6**: 273-302, 12 figs.

Moeritherium andrewsi, *Palaeomastodon intermedius*, *Phiomia wintoni*, *P. osborni*, *P. minor*. Lower jaws and teeth; figs., discussion.

Eocene, Oligocene: Fayûm, Egypt.

Archidiskodon proplanifrons, *A. subplanifrons*. Outline reconstructions.

Middle Pliocene [Lower Pleistocene?]: South Africa.

1942. *Proboscidea . . . II. Stegodontoidea, Elephantoidea*. xxvii + 805-1675 pp., col. frontisp., 18 pls., 564 text-figs. New York, Amer. Mus. Nat. Hist.

A continuation of 1936, q.v.

Archidiskodon broomi Osborn, *A. milletti* Dart, *A. loxodontoides* Dart, *A. yorki* Dart, *A. subplanifrons* Osborn, *A. proplanifrons* Osborn, *Metarchidiskodon griqua* Haughton, *Loxodonta prima* Dart, *L. africana* var. *obliqua* Dart, *L. subantiqua* Haughton, *L. africana* Blumenbach, *L. zulu* Scott, *Palaeoloxodon yorki* Dart, *P. kuhni* Dart, *P. wilmani* Dart, *P. ? andrewsi* Dart, *P. atlanticus* Pomel, *P. jolensis* Pomel, *P. recki* Dietrich, *P. transvaalensis* Dart, *P. sheppardi* Dart, *P. archidiskodontoides* Haughton, *P. hanekomi* Dart, *P. darti* Cooke & Clark.

Various horizons and localities.

OWEN, R., 1875. On fossil evidences of a sirenian mammal (*Eotherium aegyptiacum* Owen) from the Nummulitic Eocene of the Mokattam cliffs, near Cairo. *Quart. J. geol. Soc. London*, **31**: 100-105, 1 pl.

Natural endocast of *Eotherium aegyptiacum* **gen. et sp. nov.**, descr. and figd.

[The trivial name does not appear either in the text or on the plate, but in the title and in the explanation of the plate. That gen. and sp. are both new is nowhere stated.]

PALLARY, P., 1887a. La sablière d'Aboukir. *Bull. Soc. Géogr. Oran*, **7**: 46-47.

Elephas atlanticus Pomel, zoril, horse, [*Hippopotamus*], *Bubalus antiquus* Duv.

Quaternary: Aboukir, between Mostaganem and Relizane, Algeria.

1887b. Matériaux pouvant servir à la détermination de l'anthropologie en Algérie. Excursion dans l'arrondissement de Mascara. *Bull. Soc. Géogr. Oran*, **7**: 48-58, 3 figs.

Bos (ne diffère pas notablement du bœuf actuel), *Camelus thomasi*, *Antilope bubalis*, *Hippopotamus*, *Equus*, *Rhinoceros mauritanicus*, *Elephas atlanticus*, *Elephas* de petite taille, *Felis leo*, *Felis* sp., *Hyaena spelaea*.

Associated with several cultures (chellean, moustertian, very coarse pottery and worked bones); sablière de Ternifine, Palikao.

1892. Monographie paléontologique de l'arrondissement d'Oran. *Bull. Soc. Anthropol. Lyon*, **11**: 285-306.

[Not seen.]

1900. Note sur le girafe et le chameau du Quaternaire algérien. *Bull. Soc. géol. Fr.*, Paris, (3) **28**: 908-909.

Camelopardalis giraffa Gmelin, *Camelus thomasi* Pomel.

Sablière de Ternifine (= Palikao), nr. Mascara, dépt d'Oran. [*Anthropologie*, **12**: 694.]

PALLARY, P. (*contd.*)

1910 (1907). Note sur un gisement paléolithique de la province d'Oran. *Bull. archéol.*, Paris.

[Rhinoceros, large bovine, zebra. *Anthropologie*, Paris, **22**: 317.]

[Late Pleistocene]: bridge over R. Mouillah, 4 km. N. of Marnia.

1910. *Bull. Soc. Géogr. Oran*, **30**: 77-90.

[An error often copied: the reference is to BARBIN, 1910, q.v.]

1922. Notes critiques de préhistoire nord-africaine. *Rev. afric.*, Alger, **63**: 366-424.

[Not seen: *teste* BLONDEL, p. 145.]

1923. Les origines de la faune marocaine. *Bull. Soc. Hist. nat. Afr. N.*, Alger, **14**: 275-290.

Origin of present fauna of molluscs and vertebrates. Quaternary mammalian fauna clearly African with very small palaeartic element. Neolithic fauna much more African than palaeartic. Recent fauna with more palaeartic spp. but retains an African facies.

1934. L'abri Alain près d'Oran (Algérie). *Arch. Inst. Paléont. hum.*, Paris, mém. **12**: 1-50, 5 pls., 22 text-figs.

Provisional list of vernacular names; lion, panther, hyaena, jackal, fox, mongoose, bats, zebra, large bovine, smaller bovine, gnu, hartebeeste, mouflon, several gazelles, several antelopes, deer, deer with thick jaws [= *Megaceroides*].

Pleistocene [Ibero-maurusian culture].

[*Anthropologie*, **45**: 140-141.]

PALLARY, P., & TOMMASINI, P., 1892 (1891). La grotte des troglodytes (Oran). *C.R. Ass. franç. Av. Sci.*, Paris, **20**: 633-649.

1. *Rhinoceros* sp.

[Upper Pleistocene (pre-neolithic but not mousterian culture).]

2. *Canis niloticus* (?) Geoff. St.-Hil.; *Hystrix cristata* Linné; *Rhinoceros mauritanicus* Pom. (?); *Equus* sp.; *Asinus* sp.; *Sus scrofa* Linné; *Gazella dorcas* Pallas; *Alcelaphus bubalis* Pallas; *Bos* sp. "de très grande taille"; *Bos atlanticus* Blyth (??); *Ovis* sp.; *Capra hispanica* Linné.

[Late Pleistocene ("la belle période néolithique").]

PAPIER, [A.], 1876. [Mammifère fossile près de Bône (Algérie)]. *Bull. Soc. géol. Fr.*, Paris, (3) **4**: 500-501.

Abstract of letter concerning discovery of syntypes of *Hippopotamus hipponensis* Gaudry. Pliocene: L. bank of Seybouse, Duvivier [S. of Bône on railway].

1878. Sur le gisement précis de l'*Hippopotamus hipponensis*. *Bull. Soc. géol. Fr.*, Paris, (3) **6**: 389-391.

Addnl. details: see 1876.

PASSEMARD, E. See DEPÉRET, PASSEMARD & ROCHETTE.

PATERSON, T. T., 1941. A world correlation of the Pleistocene. *Trans. Roy. Soc. Edinburgh*, **60**: 373-425, 23 figs.

Essentially geological: discussion of palaeontological evidence, pp. 412-415.

PERINGUEY, L., 1907. [Fossil mammals and stone implements.] *Trans. S. Afr. phil. Soc. Cape Town*, **16**, min. proc.: ix-x.

Bubalus baini; horse, ? new sp.; rhinoceros, ? new var. or sp.

Below blown sand: Slangkop, Darling District.

- PETROCCHI, C., 1941a. Il giacimento fossilifero di Sahabi. *Boll. Soc. geol. ital.*, Roma, **60**: 107-114, 2 pls., 4 text-figs.
Stegotetrabelodon syrticus gen. et sp. nov.
 Accompanying fauna—cetacea, dinotheres, mastodonts, stegodonts, rhinoceroses, hippopotamuses, pigs, anthracotheres, equines, bovines, caprines, etc. (p. 109).
 Miocene ? : Sahabi, 260 km. S.S.E. of Benghazi, Cyrenaica.
- 1941b. Ricerche preistoriche in Cirenaica. *Africa ital.*, **7**.
 [Not seen: faunal list cited by MCBURNEY in *Anthropologie*, **54**: 203.
Cervus sp., *Ovis* sp., *Capra* sp., *Bos primigenius*, "*Equus caballus*", "*E. asinus hydruntinus*", *Rhinoceros* (*mercki*?), *Hyaena* sp., *Hystrix cristata*.
 Associated with mesolithic ? cultures: Hagfa et Tera, 30 km. E. of Benghazi, Cyrenaica.]
1943. Sahabi, eine neue Seite in der Geschichte der Erde. *N. Jb. Min. Geol. Paläont.*, Stuttgart, **1943 B**: 1-9, 4 figs.
Stegotetrabelodon syrticus Petr., *S. lybicus* sp. nov., *Stegolophodon syrticus* Petr., *S. sahabianus* sp. nov., addnl. descr. and discussion.
 Pliocene: Sahabi, 200 km. S. of Benghazi, Cyrenaica.
- PETRONIEVICS, B., 1923. Remarks upon the skulls of *Moeritherium* and *Palaeomastodon*. *Ann. Mag. nat. Hist.*, London, (9) **12**: 55-61, 1 pl., 2 text-figs.
Moeritherium ancestrale sp. nov.
 Detailed comparison of skull of *Moeritherium* and *Palaeomastodon*.
 Middle Eocene: Fayûm, Egypt.
- PIA, J., 1930. Eine neue quartäre Warzenschwein-Art aus Südwestafrika. *Cbl. Min. Geol. Paläont.*, Stuttgart, **1930 B**: 76-83, 205-206, 2 figs.
Phacochoerus stenobunus sp. nov.
 "Kalahari-Kalk" [= Pleistocene]: 25 miles N.E. of Grootfontein, S.W. Africa.
- PILGRIM, G. E., 1941. The dispersal of the Artiodactyla. *Biol. Rev.*, Cambridge, **16**: 134-163.
 "By a process of elimination Central Africa is indicated as the probable dispersal centre."
1947. The evolution of the buffaloes, oxen, sheep and goats. *J. Linn. Soc. (Zool.)*, London, **41**: 272-286, 6 figs. table.
Eotragus possibly ancestral to bovine antelopes as well as to buffaloes and oxen.
 Miocene: Europe and Central Africa.
- PILGRIM, G. E., & HOPWOOD, A. T., 1928. *Catalogue of the Pontian Bovidae of Europe in the Department of Geology*. vii + 106 pp., 9 pls., 3 text-figs., London, Trustees of the British Museum.
Gazella oranensis Pomel, *G. atlantica* Thomas briefly discussed (p. 15).
 Pleistocene: Algeria.
- PIVETEAU, J., 1948. Les conditions organiques du phénomène humain. *Anthropologie*, Paris, **52**: 393-410, 3 figs.
 Significance of australopithecines in human evolution.
- POHLE, H., 1928. Die Raubtiere von Oldoway. *Wiss. Ergebn. Oldoway-Exped. 1913*, (N.F.) **3**: 45-54, 3 pls.
Felis aff. *caffa* Desm., *Hyaena* aff. *brunnea* Thunb., *Prototocyon recki* gen. et sp. nov., *Lupulella mesomelas latirostris* [sub.] sp. nov., *Canis africanus* sp. nov.
 [Middle Pleistocene.]
- See also RECK & POHLE.

POMEL, A., 1871. Le Sahara (géologie, géographie et biologie). *Bull. Soc. Climat. Alger*, 8: 133-265.

Mammals occasionally mentioned *en passant*.

[A separate work of the same title is probably this with new pagination. Not seen.]

1876. [Discussion to GAUDRY, 1876a, q.v.]

Hippopotamus hipponensis from a quaternary deposit.

1878a. Sur un gisement d'Hipparion près d'Oran. *Bull. Soc. géol. Fr.*, Paris, (3) 6: 213-216.

Hipparion sp. nearer to Pikermi than to Cucuron sp.

Posterior to Astesan, anterior to Quaternary: Kharoubi.

1878b. [Discussion to TOURNOUËR, 1878b, q.v.]

Hipparion from near Constantine, also *Hippopotamus hipponensis* Gaudry, probably same age as *Hipparion* from Cucuron [i.e. Pontian].

1879. Ossements d'éléphants et d'hippopotames découverts dans une station préhistorique de la plaine d'Eghis (province d'Oran). *Bull. Soc. géol. Fr.*, Paris, (3) 7: 44-51.

Elephas atlanticus sp. nov., "disparue . . . depuis une époque très-rapprochée des temps historiques."

[This locality is variously referred to in the literature as Ternifine or Palikao.]

1886 (1885)a. Sur la station préhistorique de Ternifine, près Mascara. *C.R. Ass. franç. Av. Sci.*, Paris, 14, 1: p. 128.

Elephas atlanticus, "un autre petit éléphant voisin du Melitensis," *Rhinoceros mauritanicus* [nom. nud.], hippopotamus, *Camelus thomasi* [nom. nud.], horse rather larger than the zebra, antelopes and oxen, lion.

[Paleolithic culture: locality often referred to as Palikao.]

1886 (1885)b. Station préhistorique de Ternifine, près de Mascara (Algérie). *C.R. Ass. franç. Av. Sci.*, Paris, 14, 1: 164.

Elephas atlanticus, *Rhinoceros mauritanicus*, *Hippopotamus major*. Horse, camel, ox and other ruminants.

Paleolithic and neolithic horizons.

1886 (1885)c. Station préhistorique de Ternifine (Mascara). *C.R. Ass. franç. Av. Sci.*, Paris, 14, 2: 504-505.

Elephas atlanticus, *Rhinoceros mauritanicus*, *Hippopotamus major* (?), *Camelus thomasi*, *Equus* sp., *Bos*, antilopine ruminants, *Felis leo* (?), very small elephant.

Belongs to the third phase of Algerian Quaternary, with *Bubalus antiquus* Duvernoy, and is fairly recent.

1888a. Visite faite à la station préhistorique de Ternifine (Palikao) par le groupe excursionniste D. *C.R. Ass. franç. Av. Sci.*, Paris, 17, 1: 208-212.

Elephas atlanticus Pom., *Elephas* sp. (?), *Hippopotamus*, *Sus scropha* (?), *Camelus thomasi* Pom., *Bubalus antiquus* Duvernoy, *Bos* sp. (?), *Antilope* sp. (?) perhaps *A. bubalis*, *Antilope* species (?) gazelle type, sheep or goat—very rare, *Rhinoceros mauritanicus* Pom., *Equus* species (?) . . . "qu'on pourrait nommer *Equus mauritanicus*," *Hyaena spelaea*, *Felis leo* (?), *F. pardus* [?], (?) *Hystrix cristata* L.

[Pleistocene.]

[*Equus mauritanicus* Pomel and *Rhinoceros mauritanicus* Pomel are here spp. nov.]

POMEL, A. (*contd.*)

1888*b*. La station quaternaire de Palikao (Alger). II. Note géologique et paléontologique. *Matér. Hist. prim. nat. Homme*, Paris, 22: 224-232.

Elephas atlanticus Pom., *E. sp.*, *Hippopotamus sp.*, *Sus scrofa* (?), *Camelus thomasi* Pom., *Bubalus antiquus*, *Bos sp.*, *Antilope spp.*, sheep or goat, *Rhinoceros mauritanicus* Pom., *Equus mauritanicus*, *Hyaena spelaea*, *Felis leo* (?), *F. pardus* (?), *Hystrix cristata* (?).

Relatively recent Quaternary.

1890*a*. Description stratigraphique de l'Algérie. Expl. 2^e édit. carte géol., Alger, pp. 1-217.

Primarily stratigraphical. Fossil mammals, often in the vernacular, p. 171-.

"Pliocène, Quaternaire": Algeria, various localities.

1890*b*. Sur les hippopotames fossiles de l'Algérie. *C.R. Acad. Sci. Paris*, 110: 1112-1116.

1. *Hippopotamus hipponensis* Gaudry.

Quaternary: nr. Duvivier, S. of Bône; road from Saint Arnaud to Beni Fouda.

2. *Hippopotamus sp.* associated with horse, ox, antelopes.

Mines of Beni Saf.

3. *Hippopotamus sirensis sp. nov.*

Plain of Eghis, below Mascara.

4. *Hippopotamus amphibius* (?) with *Bos (Bubalus) antiquus* Duvernoy.

Recent alluvium: various localities.

1892*a*. Sur le *Bramus*, nouveau type de rongeur fossile des phosphorites quaternaires de la Berbérie. *C.R. Acad. Sci. Paris*, 114: 1159-1163.

Bramus barbarus gen. et sp. nov.

Country of the Trara de Nédroma, towards Aïn-Mefta. Towards El Sarria, district of the Beni-Ouar-sous.

1892*b*. Sur le *Libytherium maurusium*, grand ruminant du terrain pliocène de l'Algérie. *C.R. Acad. Sci. Paris*, 115: 100-102.

L. maurusium gen. et sp. nov.

Pliocene (Plaisancian): Saint-Charles, Oran.

1892*c*. Sur un macaque fossile des phosphorites quaternaires de l'Algérie, *Macacus trarensis*. *C.R. Acad. Sci. Paris*, 115: 157-160.

M. trarensis sp. nov.

Aïn-Mefta.

1892*d*. Sur deux ruminants de l'époque néolithique de l'Algérie. *C.R. Acad. Sci. Paris*, 115: 213-216.

Cervus pachygenys [sp. nov.].

Grotto nr. Bougie; S. of Medéah, on railway from Bérrouaghia.

Antilope (?? *Nagor*) *maupasi [sp. nov.]*.

"molasses pliocènes du ravin de la Femme-Sauvage, près d'Alger": La Grotte du Grand Rocher, near Guyotville.

1893*a*. *Bubalus antiquus*. *Carte géol. Algérie, Paléont., Monogr.*, Alger: 1-94, 10 pls.

Bubalus (Arni) antiquus Duvernoy.

1893*b*. Présentation d'une monographie iconographique du *Bubalus antiquus* Duvernoy. *C.R. Acad. Sci. Paris*, 116: 1346-1349.

Brief summary and discussion of 1893*a*, q.v.

[Of bibliographical value as proof that 1893*a* was publ. before 12 June 1893.]

POMEL, A. (*contd.*)

1893c. Caméliens et Cervidés. *Carte géol. Algérie, Paléont., Monogr.*, Alger: 1-52, 8 pls.

Camelus dromedarius, *C. thomasi* Pom. 1885 [see 1886 (1885)a, b, c, where name probably not valid], *Libytherium maurusium* Pom. 1892 [see 1892b], *Cervus pachygenys* Pom., *Cervus* sp.

1894a. Les Bœufs Taureaux. *Carte géol. Algérie, Paléont., Monogr.*, Alger: 1-106, 19 pls.

Bos opisthonomus [sp. nov.], *Bos ibericus* Sanson, *Bos curvidens* [sp. nov.].

1894b. [transmet à l'Académie un exemplaire de sa "Monographie des Bœufs-Taureaux . . ."]. *C.R. Acad. Sci. Paris*, 119: 526.

Brief account of 1894a, q.v.

[Monogr. publ. before 24 September 1894.]

1894c. Les Bosélaphes Ray. *Carte géol. Algérie, Paléont., Monogr.*, Alger: 1-60, 11 pls.

Connochaetes prognu [sp. nov.], *Boselaphus probubalis* [sp. nov.], *B. saldensis* [sp. nov.], *B. ambiguus* [sp. nov.].

1894d. Sur une nouvelle grotte ossifère découverte à la Pointe-Pescade, à l'Ouest d'Alger-Saint-Eugène. *C.R. Acad. Sci. Paris*, 119: 986-989.

Bear, small cat or viverrine, *Hystrix cristata*?, *Bubalus antiquus* Duvern., *Bos opisthonomus* Pom., *B. ibericus* Sans., *Cervus pachygenys* Pom., *Antilope* (*Gazella*), *A. (Oreas)*, gnu, wart-hog, *Sus scrofa*?, *Phacochoerus aethiopicus*?, *Hippopotamus*?, *Equus*, *Rhinoceros mauritanicus* Pom.?, *Elephas atlanticus* Pom.—"première détermination provisoire."

1895. Les Antilopes Pallas. *Carte géol. Algérie, Paléont., Monogr.*, Alger: 1-56, 15 pls.

Antilope (Dorcas) subgazella sp. nov., *A. (D.) kevella* Gm., *A. (D.) subkevella* sp. nov., *A. (D.) setifensis* sp. nov., *Dorcas thomasi* nom. nov. pro *Gazella atlantica* Ph. Thomas, 1884, non Bourguignat, 1870, *A. (D.) nodicornis* sp. nov., *A. (D.) crassicornis* sp. nov., *A. (D.) massoessilia* sp. nov., *A. (D.) oranensis* sp. nov., *A. (D.) triquetricornis* sp. nov., *A. (Oryx)* cf. *leucoryx* Licht., *A. (Ægoceros) troglodytorum* sp. nov., *A. (Æg.) lunata* sp. nov., *A. (Nagor) maupasii* sp. nov., *A. (Oreas) procanna* sp. nov., *A. (Oreas?) brevicornis* sp. nov., *Oreonagor* sub-gen. nov. for *A. (Oreonagor) tournoueri* Thos., *A. (Grimmia) leporina* sp. nov., *Antilope* (sous genre . . . ?) *preeminens* sp. nov., descr. and figs.

Pleistocene and later: various localities.

[*Antilope (Dorcas) pallaryi* sp. nov. (pp. 8-9), based on a skull and skin, is a **Recent species** apparently overlooked by Lydekker (*Cat. Ung. Mamm. Brit. Mus.*) and Allen (*Check-list Afr. Mamm.*), as well as by earlier authors.]

1896 (1895). Les Rhinocéros Quaternaires. *Carte géol. Algérie, Paléont., Monogr.*, Alger: 1-49, 12 pls.

Rhinoceros (Atelodus) mauritanicus, *Rh. (A.) subinermis* sp. nov., descr. and figs.

"Terrains quaternaires récents de l'Algérie" (p. 46). [The first few pages contain a discussion of the rhinoceroses in the author's *Cat. Méth.*, 1853.]

[For date of publ. see note to 1896c.]

1896a. Les Éléphants Quaternaires. *Carte géol. Algérie, Paléont., Monogr.*, Alger: 1-68, 15 pls.

Mastodon cf. *borsonis*, *Elephas meridionalis*, *E. cf. melitensis* Falc., *E. africanus* Cuv. (*priscus* Goldf.), *E. jolensis* (cf. *antiquus* Olim) sp. nov., *E. atlanticus* sp. nov. [sic, but see 1879; 1886 (1885) a, b, and c; 1888a, b], descr. and figs.

Pleistocene and later: various localities.

POMEL, A. (*contd.*)

1896b. Monographie des Éléphants quaternaires de l'Algérie. *C.R. Acad. Sci. Paris*, **123**: 975-976.

Brief summary of 1896a, q.v.

[Monogr. publ. before 7 December 1896.]

1896c. Les Rhinocéros quaternaires de l'Algérie. *C.R. Acad. Sci. Paris*, **123**: 977-978.

Brief summary of 1896 (1895), q.v.

[Monogr. publ. before 7 December 1896. P. refers to Prix Petit d'Ormoy awarded 23:xii:1895 (*C.R. Acad. Sci. Paris*, **121**: 1057), has since contd. publication, and this is "une nouvelle monographie." Hence date of Monograph is 1896 *not* 1895 as t. p.]

1896d. Les Hippopotames. *Carte géol. Algérie, Paléont., Monogr.*, Alger: 1-65, 21 pls.

H. hipponensis Gaudry, *H. sirensis* Pom., *H. icosiensis* sp. nov., descr. and figs.

Various localities.

H. cf. annectens? Falconer.

Horizon unknown: Lower Egypt.

1896e. Sur les hippopotames fossiles de l'Algérie. *C.R. Acad. Sci. Paris*, **123**: 1241-1242.

Brief summary of 1896d, q.v.

[Monogr. publ. before 28 December 1896.]

1897 (1896)a. Singe et Homme. *Carte géol. Algérie, Paléont., Monogr.*, Alger: 1-34.

Macacus proinuus sp. nov., [p. 11 in text] = *Simia proinuus* on plates.

[1896 on t.p.; 1897 on wrapper.]

1897 (1896)b. Les carnassiers. *Carte géol. Algérie, Paléont., Monogr.*, Alger: 1-42, 15 pls.

Felis spelaea Goldf., *F. cf. antiqua* Goldf., *Hyaena spelaea*, *H. vulgaris*, *Ursus libycus*, *Canis aureus*, *C. familiaris*, *C. familiaris latifrons*, *C. familiaris angustifrons*, *C. familiaris prokelb*, *C. familiaris getulus*, *Herpestes* sp., "zorille de Vaillant."

[1896 on t.p.; 1897 on wrapper.]

1897a. Monographie des carnassiers fossiles quaternaires de l'Algérie. *C.R. Acad. Sci. Paris*, **124**: 889-890.

Brief summary of 1897 (1896)b, q.v.

[Monogr. publ. before 26 April 1897.]

1897b. Les Suilliens: Porciens. *Carte géol. Algérie, Paléont., Monogr.*, Alger: 1-39, 10 pls.

Sus algeriensis sp. nov., *S. barbarus* sp. nov., *Phacochoerus mauritanicus* sp. nov., *P. barbarus* sp. nov.

1897c. Note de M. Pomel accompagnant la présentation de son ouvrage sur les "Mammifères quaternaires fossiles algériens, monographie des Porcins." *C.R. Acad. Sci. Paris*, **124**: 1421-1422.

Brief summary of 1897b.

[Monogr. publ. before 21 June 1897.]

1897d. Les Équidés. *Carte géol. Algérie, Paléont., Monogr.*, Alger: 1-44, 12 pls.

Hipparion? libycum sp. nov., *H. massoesylium* sp. nov., *H. setifensis* sp. nov., *Hipparium* [sic] *ambiguum* sp. nov., *Equus numidicus* sp. nov. = *stenonis* Thomas [non Cocchi], *E. mauritanicus* Pom., *E. (Asinus) africanus* Sanson.

POMEL, A. (*contd.*)

1898 (1897). Les Ovidés. *Carte géol. Algérie, Paléont., Monogr.*, Alger: 1-32, 14 pls.

Ovis paleotragus sp. nov., *O. (Aries) ambigua* sp. nov., *O. (A.) cf. africana* Sanson, *O. (Capra) promaza* sp. nov.

POMPECKI, J. F., 1922. Das Ohrskelett von Zeuglodon. *Senckenb.*, Frankfurt a.M., 4: 43-100, 1 pl.

Zeuglodon osiris Dames.

Middle and Upper Eocene: Fayûm, Egypt.

PONTIER, G., 1907. Sur une espèce nouvelle de *Paleomastodon* (*P. barroisi*). *Ann. Soc. géol. Nord. Lille*, 36: 150-154, 2 figs.

Palaeomastodon barroisi sp. nov.

Bartonian: Fayûm, Egypt.

1910 (1909). Observations sur le *Paleomastodon beadnelli*. *Ann. Soc. géol. Nord, Lille*, 38: 166-171, 2 figs.

[Oligocene]: Fayûm, Egypt.

PRAG, J. J., 1935. An abnormal baboon sacrum found at Lindeques Drift. *S. Afr. J. Sci.*, Johannesburg, 32: 356-359, 1 fig.

Sacralisation of 5th lumbar vertebra associated with abnormal 1st sacral vertebra.

Cave deposit [Recent or sub-Recent?]: 22 miles W. of Vereeniging, Transvaal.

PRIEM, F., 1907. Sur des vertébrés de l'Éocène d'Égypte et de Tunisie. *C.R. Soc. géol. Fr.*, Paris, 1907: 125.

Protosiren fraasi, lower jaw.

Eocene: Mokattam hills [near Cairo].

1908 (1907). Sur des vertébrés de l'Éocène d'Égypte et de Tunisie. *Bull. Soc. géol. Fr.*, Paris, (4) 7: 412-419, 2 pls., 2 text-figs.

Protosiren fraasi Abel.

Eocene: Mokattam hills [near Cairo].

PROCHOWNICK, L., 1897. Die Beckenformen der Anthropoïden. *Corr. Bl. dtsh. Ges. Anthropol.*, 28: no. 10.

[Comparative study of pelves of gorilla, chimpanzee, orang, gibbon. *Anthropologie*, 9: 598-599.]

PYCRAFT, W. P., SMITH, G. E., YEARSLEY, M., CARTER, J. T., SMITH, R. A., HOPWOOD, A. T., BATE, D. M. A., SWINTON, W. E., BATHER, F. A., 1928. *Rhodesian Man and other associated remains*. xiii + 76 pp., 5 pls., 23 text-figs. See HOPWOOD, 1928a.

QUIRING, H., 1930. *Die zeitlichen Beziehungen der Flussterrassen Europas und Nordafrikas zu den Menschheitskulturen*. 34 pp., 4 tab., Stuttgart.

[Terraces isochronous. *Neues Jb. Min. Geol. Paläont.*, 1931, 3: 460.]

RAMSAY, A. C., & GEIKIE, J., 1878. The geology of Gibraltar. *Quart. J. geol. Soc. London*, 34: 505-541, 12 figs., map.

Elephas antiquus.

No horizon: near Tangier.

- RECK, H., 1914a. Erste vorläufige Mitteilung über den Fund eines fossilen Menschenskelets aus Zentralafrika. *S.B. Ges. naturf. Fr. Berlin*, 1914: 81–95, 3 pls., 4 text-figs.
 Preliminary faunal list in vernacular. Pluvial Diluvium [Middle Pleistocene]: Oldoway [= Olduvai], lat. 3° S. long. 35° 25' E., [Tanganyika Territory].
 [Anthropologie, 26: 491–492; Science (N.S.) 40: 19–20.]
- 1914b. Zweite vorläufige Mitteilung über fossile Tier- und Menschenfunde aus Oldoway in Zentralafrika. *S.B. Ges. naturf. Fr. Berlin*, 1914: 305–318, 1 fig.
 New species of elephant [*E. antiquus recki*] belonging to the *E. hysudricus*–*E. indicus* lineage.
 Rhinoceros [*R. simus germano-africanus*] near *R. simus*.
- 1922 (1921). Eine neue diluviale Säugetierfundstelle am Minjonjo in Deutsch-Ostafrika (nebst palaeontologischer Notiz von W. O. Dietrich, Berlin). *S.B. Ges. naturf. Fr. Berlin*, 1921: 25–36, 5 figs.
Elephas antiquus recki, [*Giraffa*, *Hippopotamus*].
1925. Aus der Vorzeit des innerafrikanischen Wildes, *Leipzig. illustr. Ztg.*, 164: 451.
Pelorovis oldowayensis gen. et sp. nov.
 [Middle Pleistocene: Olduvai.]
 [Not seen; ref. from 1928, q.v.]
1926. Prähistorische Grab- und Menschenfunde und ihre Beziehungen zur Pluvialzeit in Ostafrika. *Mitt. dtsh. Schutzgeb.*, Berlin, 34: 50–86, 4 pls., fold. sketch map 1: 2,000,000.
 Mainly archaeology. Associated faunas of Olduvai and other localities discussed, pp. 81–86.
1928. *Pelorovis oldowayensis* n.g., n. sp. *Wiss. Ergebn. Oldoway-Exped. 1913*; N.F., 3, pp. 57–67, 2 pls., 1 text-fig.
 Addnl descr. & figs. For original descr. see 1925.
- 1932a. Meine zweite Oldoway-Expedition 1931. *Forsch. Fortschr. dtsh. Wiss.*, Berlin, 8: 235–236.
 Brief popular account.
- 1932b. Der Mensch und die Kultur von Oldoway. *Umschau*, Frankfurt a.M., 36: 707–711, 12 figs.
 Popular account. *Dinotherium* figd.
1933. *Oldoway, die Schlucht des Urmenschen*. 308 pp., 2 panoramic pls., 74 text-figs., map. Leipzig.
 Popular account of the expeditions of 1913, 1931.
Rhynotragus semiticus [sp. nov.], *Thaleroceros radiciformis* [sp. nov.], *Adenota recki* [Schwarz, 1932].
 [The validity of the first two names having been questioned, the author publ. formal descr. and figs. in 1935, q.v.]
1935. Neue genera aus der Oldoway-Fauna. *Cbl. Min. Geol. Paläont.*, Stuttgart, 1935 B: 215–218, 2 figs.
Rhynotragus semiticus gen. et sp. nov., *Thaleroceros radiciformis* gen. et sp. nov., descr. and figs.
 Middle Pleistocene: Olduvai, Tanganyika Territory.
 [See also 1933.]

[Fortschr. Paläont., 1: 325, 328.]

RECK, H. (*contd.*)

1937. *Thaleroceros radiciformis* n.g. n. sp. *Wiss. Ergebn. Oldoway-Exped. 1913* (N.F.) 4: 137-142, 1 pl.

A horned ruminant of uncertain affinities.

[Middle Pleistocene.]

[See also 1933, 1935.]

See also LEAKEY, HOPWOOD, & RECK.

RECK, H., & DIETRICH, W. O., 1923. Eine jungfossile Schneckenfauna aus dem Gebiet der deutsch-ostafrikanischen Mittellandbahn in der Gegend der Saline Gottorp. *Cbl. Min. Geol. Paläont.*, Stuttgart, 1923: 309-320, 2 figs.

Hippopotamus amphibius L., antelope teeth.

RECK, H., & KOHL-LARSEN, L., 1936. Erster Überblick über die jungdiluvialen Tier- und Menschenfunde Dr. Kohl-Larsens im Nordöstlichen Teil des Njarasa-Grabens (Ostafrika) und die geologischen Verhältnisse des Fundgebietes. *Geol. Rdsch.*, Leipzig, 27: 401-441, 13 figs.

Papio sp. (cf. *Simopithecus oswaldi* Andr.), *Cercocebus* sp., *Felis leo* cf. *spelaea*, *Hyaena crocuta*, *Mungos* cf. *sanguineus*, *Hystrix* sp., *Loxodonta* sp., *Hippotigris quagga*, *Hipparion* sp., *Ceratotherium simum*, *Diceros bicornis*, *Hippopotamus amphibius*, *Phacochoerus* spp., *Koiropotamus* sp., *Hylochoerus*?, *Giraffa* sp., *Buffelus* sp., *Taurotragus* sp., *Tragelaphus* sp., *Gazella* spp., *Kobus* sp., *Cervicapra* sp., *Connochaetes* sp.

[A preliminary list; identifications by DIETRICH.]

RECK, H., & POHLE, H., 1922. Ueber einen vermutlich diluvialen Säugetierrest von der Mittellandbahn in Deutsch-Ostafrika. *Cbl. Min. Geol. Paläont.*, Stuttgart, 1922: 546-557.

Otocyon sp., calcaneus descr. and fig. Review of other localities yielding fossil mammals. Age unknown (Pleistocene?): 67 km. W. of Itigi and W.N.W. of Kilimatinde, Tanganyika Territory.

REMANE, A., 1921. Zur Beurteilung der fossilen Anthropoiden. *Cbl. Min. Geol. Paläont.*, Stuttgart, 1921: 335-339.

Parapithecus, *Moeripithecus*, *Propliopithecus*, members of the Hylobatidae.

1924. Einige Bemerkungen über *Prohylobates tandyi* R. Fourtau und *Dryopithecus mogharensis* R. Fourtau. *Cbl. Min. Geol. Paläont.*, Stuttgart, 1924: 220-223.

Discussion of relevant portion of FOURTAU, 1920, q.v.

Prohylobates closely related to, and probably directly descended from, *Propliopithecus*. *Dryopithecus* an artificial genus (künstliche Gattung), and *D. mogharensis* sp. indet.

1925. Der fossile Pavian (*Papio* sp.) von Oldoway nebst Bemerkungen über die Gattung *Simopithecus* C. W. Andrews. *Wiss. Ergebn. Oldoway-Exped. 1913*, (N.F.) 2: 85-90, 1 pl.

Juvenile skull figd. and descr.

Simopithecus a synonym of *Papio*.

[Middle Pleistocene.]

RENOU, E. J., (1846). *Géologie de l'Algérie*.

Cat, dog, hyaena, rhinoceros, wart-hog, sheep, antelope.

Various caverns.

[ex GERVAIS, 1849b, p. 362. May be "Exploration scientifique de l'Algérie . . .", 8, Paris, 1846, viii + 481 pp., map: mainly itineraries and topography with much miscellaneous information.]

- ROBERT, A., 1900. Notes sur quelques stations préhistoriques de la commune mixte d'Aïn-Melila. *Rec. Not. Mem. Soc. archéol. Constantine*, 34: 1-50, 28 pls.
[Bubal, deer, ox, horse, ass, fox, hyaena, jackal, boar, gazelle, antelope, sheep, goat, hare, rabbit, gerbil.
Bou Zabaouine, douar Ouad Belaguel. *Anthropologie*, 13: 361-364.]
1906. La grotte de Bou-Zabaouine, Dépt. de Constantine (Algérie). *Congr. préhist. Fr.*, Paris, 1: 222-231, 5 figs.
[Not seen: preliminary report in 1900, q.v.]
- ROBINSON, J. T., 1949. Some observations on the systematic position of the Australopithecinae. *S. Afr. J. Sci.*, Johannesburg, 46: 83-87, 4 figs.
See also BROOM & ROBINSON.
See also BROOM, ROBINSON & SCHEPERS.
- ROCHETTE, J. *See* DEPÉRET, PASSEMARD & RÔCHETTE.
- ROMAN, F., 1931. Description de la faune pontique du Djerid (El Hamma et Nefta). *Ann. Univ. Lyon*, (N.S.) I, 48: 30-42, 2 pls., 2 text-figs.
Merycopotamus aff. *dissimilis* Falconer & Cautley, *Mastodon* cf. *longirostris* Kaup, *Hipparion* size of *gracile*, *Tragocerus amaltheus* Roth & Wagner, *Tragocerus* or *Hemitragus*, *Capreolus matheroni* Gervais.
1934. Sur quelques vertébrés subfossiles du Sahara occidental. *C.R. Soc. géol. Fr.*, Paris, 1934: 13-14.
Hippopotamus amphibius, *Bos* sp., *Limnotragus* cf. *gratus*, *Cervus* sp., viverrid, *Mellivora*, *Thryonomys* cf. *calamophagus*, associated with a neolithic culture.
50 km. N. of Arraouan, and 10 km. S. of Guir, French West Africa.
- 1935 (1934). Les animaux de climat humide dans le Sahara occidental. *C.R. Ass. franç. Av. Sci.*, Paris, 58: 132-134.
Hippopotamus amphibius, *Bos* cf. *brachyceros*, *Bubalus buselaphus*, *Limnotragus* sp., small Cervidae, *Mellivora*, viverrid, *Thryonomys calamophagus*.
[Upper Pleistocene] associated with neolithic implements: 50 km. N. of Arraouan and 10 km. S. of Guir.
[*See also* 1934.]
1935. Sur une faunule de vertébrés et sur des pièces néolithiques du Sahara occidental. *Bull. Ass. rég. Paléont. Préhist.*, Lyon, 5: 13 pp., 1 pl.
[Not seen: *teste* BLONDEL, p. 614.]
See also DEPÉRET, MAYET & ROMAN.
- ROMAN, F., & SOLIGNAC, M., 1934. Découverte d'un gisement de mammifères pontiens à Douaria. (Tunisie septentrionale). *C.R. Acad. Sci. Paris*, 199: 1649-1650.
Rhinoceros pachygnathus Wagner, *Helladotherium duvernoyi* Gaudry, *Merycopotamus dissimilis* Falc. & Caut.
- ROMER, A. S., 1928. Pleistocene mammals of Algeria. Fauna of the paleolithic station of Mechta-el-Arbi. *Bull. Logan Mus.*, Beloit, Wisconsin, 1: 80-163.
1. Geographical and geological distribution of *Cynocephalus atlanticus*, *Macacus trarensis* = *M. proinuus*, *Felis leo*, *F. ocreata*, *F. serval*, *F. caracal berberorum*, *F. pardus panthera*, *Acinonyx jubatus guttatus*, *Genetta genetta afra*, *Herpestes ichneumon*, *Viverra* sp., *Hyaena crocuta*, *H. striata*, *Canis zerda*, *C. anthus*, *C. familiaris*, *Vulpes vulpes atlantica*, *Putorius nivalis numidicus*, *Lutra lutra*, *Poecilictis lybica*, *Mellivora*, *Ursus spelaeus*?, *Sorex vulgari*, *Crocidura*, *Macroscelides rozeti*, *Erinaceus algirus*, *Hystrix cristata*, *Ctenodactylus gundi*, *Meriones*, *Gerbillus*, *Jaculus*, *Mus*, *Lepus kaybolicus*, *Oryctolagus cuniculus*, *Mastodon*,

ROMER, A. S. (*contd.*)

Elephas planifrons, *E. meridionalis*, *E. atlanticus*, *E. cf. melitensis*, *E. iolensis*, *E. africanus*, *Sus scrofa*, *S. phacochoeroides*, *Phacochoerus ethiopicus mauritanicus*, *Hippopotamus amphibius*, *Camelus dromedarius*, *Libytherium maurusium*, *Camelopardalis giraffa*, *Cervus dama*, *C. elaphus barbarus*, *C. (Megaceroides) algiricus*, *Buffelus palaeindicus*, *B. antiquus*, *Bos primigenius mauretanicus*, *B. taurus ibericus*, *Bubalis boselaphus*, *Connochoetes gnu*, *Oryx algazel*, *Cervicapra redunca maupasii*, *Cobus tournoueri*, *C. unctuosus lunata*, *Gazella dorcas*, *G. cuvieri*, *G. leptoceros loderi*, *G. granti*, *G. dama*, *G. isabella*, *G. rufifrons*, *G. triqueti-cornis*, *Lithocranius leporina*, *Ovis aries africana*, *Capra hircus*, *Ammotragus lervia*, *Oreas gaudryi*, *O. canna*, *Hipparion*, *Equus stenonis*, *E. burchelli mauritanicus*, *E. asinus africanus*, *Rhinoceros simus mauritanicus*, *R. mercki subinermis*.

2. Faunal succession:

(a) PLAISANCIAN-ASTIAN. Primitive pig, *Hippopotamus* ? *hipponensis*, mastodon, rhinoceros, *Hipparion*, *Equus* [cf.] *stenonis*, zebra.

Warm climate: good rainfall.

(b) VILLAFRANCHIAN. Mastodon, *Elephas planifrons*, *E. meridionalis*, *Hippopotamus hipponensis*, *H. amphibius*, *Sus phacochoeroides* or *S. scrofa*, buffalo, large and small oxen, oryx, *Cobus*, 3 spp. gazelles, *Lithocranius*, *Ammotragus*, primitive eland, *Hipparion*, *Equus* cf. *stenonis*, *Rhinoceros* [aff.] *simus*, baboon, lion?, spotted hyaena?

Warm, humid climate.

(c) SICILIAN, MILAZZIAN. *Cobus tournouëri*, *Elephas atlanticus*, *Buffelus palaeindicus*, *Libytherium*, rat, *Hippopotamus hipponensis*, *H. amphibius*, large ox, *Gazella dorcas*, *Rhinoceros simus*, zebra, *Hipparion*.

Hot, humid climate.

(d) TYRRHENIAN, CHELLEAN, ACHEULIAN. Lion?, panther, mongoose, spotted hyaena, bear, porcupine, *Elephas atlanticus*, *E. cf. melitensis*, pig, *Hippopotamus amphibius*, camel, giraffe, stag, buffalo, large and small oxen, gnu, hartebeest, two or three gazelles, sheep, goat?, *Ammotragus*?, white rhinoceros, zebra, ass?.

Hot, humid climate.

(e) [UPPER MONASTERIAN], MOUSTERIAN. Lion, wild cat, serval, panther, mongoose, civet, spotted and striped hyaenas, jackal, *Canis familiaris*?, fox, bear, hedgehog, porcupine, jerboa, hare?, rabbit, *Elephas atlanticus*, *E. iolensis*, pig, wart-hog, hippopotamus, *Libytherium*, camel, stag, *Cervus algericus*, buffalo, large and small oxen, hartebeest, gnu, oryx, *Cervicapra*, waterbuck, 5 spp. gazelles, eland, *Ammotragus*, sheep, goat, zebra, white rhinoceros, *Rhinoceros merckii*.

Climate relatively cold, but still humid.

(f) [RECENT], UPPER PALAEOLITHIC, NEOLITHIC. More than three fourths of the spp. still live in the area.

Upper palaeolithic climate warmer and rather dry. Neolithic climate cooler, but fluctuating between moist and dry.

3. FAUNA OF MECHTA-EL-ARBI. (Upper palaeolithic.) *Felis leo*, *F. ocreata*, *Vulpes vulpes atlantica*, *Canis aureus*, *C. familiaris getulus*, *Herpestes ichneumon*, *Erinaceus algirus*, *Hystrix cristata*, *Oryctolagus cuniculus*, *Equus mauritanicus*, *Sus scrofa*, *Cervus elaphus*?, *Bos primigenius mauretanicus*, *Bos taurus ibericus*, *Bubalis boselaphus*, *Gazella dorcas*, *G. cuvieri*, *Ovis africana*, *Ammotragus lervia*.

1930. *Australopithecus* not a chimpanzee. *Science*, New York, **71**: 482-483.

"A. not a chimpanzee, but a new and separate type of anthropoid ape, . . ."

ROMER, A. S., & NESBIT, P. H., 1930. An extinct cane-rat (*Thryonomys logani* sp. n.) from the the Central Sahara. *Ann. Mag. Nat. Hist.*, London, (10) **6**: 687-690, 1 fig.

"Late Pleistocene, more probably early Recent."

140 km. S.W. of Fort Leperrine, approx. 4° 30' E., 22° N.

ROUBAULT, M. See JOLEAUD & ROUBAULT.

ROYER, [P.], 1927. [Des fouilles faites dans une grotte du département de Constantine.] *Anthropologie*, Paris, **37**: 144-146.

Sus, antelopes, mouflon, *Bos* spp., monkey, porcupine, *Rhinoceros* sp., *Elephas* sp. [Preliminary report only.]

[Perhaps late Pleistocene]: S.W. slope of Adrar-Guelderman.

See also DE BEAUMAIS & ROYER.

RUHLMANN, A., 1936. Les grottes préhistoriques d'El Khenzira (Région de Mazagan). *Publ. Serv. Antiq. Maroc*, Paris, fasc. **2**: 130 pp., 27 figs.

[*Elephas atlanticus*, *Rhinoceros* sp., *R. mercki*, *Equus* (Zebra) *mauritanicus*, *Hystrix cristata*, *Sus scrofa*, *Phacochoerus ethiopicus*, *Bos primigenius*, perhaps *Bubalus antiquus*, *Bubalis boselaphus*, *Gazella dorcas*, *G. crassicornis* (= *G. dama*), *Cervicapra maupasi* (= *Cobus unctuosus*), *Capra hircus*, *Hyaena crocuta*, *Canis anthus*, *Vulpes atlantica*.

Pleistocene, associated with atherian and ibero-maurusian industries: 17 km. S.W. of Mazagan, 3 km. N.E. of Cap Blanc, Morocco. *Anthropologie*, **47**: 380-382.]

See NEUVILLE & RUHLMANN.

RÜTIMEYER, L., 1877. Die Rinder der Tertiär-Epoche nebst Vorstudien zu einer natürlichen Geschichte der Antilopen. Erster Theil. *Abh. schweiz. paläont. Ges.*, Zürich, **4**: 1-72, 3 pls.

1878. Zweiter Theil. *Idem*, **5**: 72-208, 4 pls., 18 [un-numbered] text-figs.

Bubalus antiquus Gervais, Setif, and *Antilope strepsiceros* [Pallas], Constantine, Algeria discussed.

SANDFORD, K. S., 1929. The pliocene and pleistocene deposits of Wadi Quena and of the Nile Valley between Luxor and Assiut. *Quart. J. Geol. Soc. London*, **85**: 493-584, 6 pls., 4 text-figs.

Buffalo, hippopotamus, equine, hartebeeste, pig, gazelle.

Buffalo and hartebeeste extinct forms.

Pleistocene: Qau village, 15 miles S.E. of Assiut, Egypt.

SAUTER, M. R., 1950. Les australopithécidés Sud-Africains. Leur position dans la phylogénie humaine. *Arch. Sci.*, Genève, **3**: 203-220. 9 figs.

Australopithecus africanus, *A. transvaalensis*, *A. prometheus*, *Plesianthropus transvaalensis*, *Paranthropus robustus*, *P. crassidens*.

SAVORNIN, J., 1920. Étude géologique de la région du Hodna et du plateau sétifien. *Bull. Cart. géol. Algérie*, Alger, **7**: 1-499, 94 figs., folding map.

1. *Hippopotamus hipponensis* Gaudry, *Elephas* aff. *meridionalis* Nesti, *Mastodon* cf. *borsoni* Hays, *Felis* sp., *Dorcas setifensis* Pomel, *Oreonagor tournoueri* Thomas, *Hipparion ambiguum* Pomel, *Equus robustus* Pom. (*stenonis* auct.).

Villafranchian: Sillègue road, between Aïn Boucherit and the bridge of Oued Berda.

2. *Hipparion sitifensis*?, *Grimmia leporina*?, *Bos* sp.?, *Hipparion*?

Villafranchian: Oued el Djeradi, below Mt. Hammou b. Goutaliz.

Redetermination of geological horizons as given by POMEL, 1895, 1896a, 1897a, 1897d.

SCHEPERS, G. W. H., 1946. The endocranial casts of the South African ape men. In BROOM & SCHEPERS, 1946.

Endocasts of *Plesianthropus transvaalensis*, *Australopithecus africanus*, *Paranthropus robustus*, compared with brains or endocasts of *Hylobates syndactylus*, *Pongo pygmaeus*, *Pan*, *Gorilla gorilla*, *Pithecanthropus erectus*, *Sinanthropus pekinensis*, *Eoanthropus dawsoni*, *Homo sapiens*.

SCHEPERS, G. W. H. (*contd.*)

1948. Problems in brain evolution. *Roy. Soc. S. Afr., Spec. Publ.*, Cape Town, Robert Broom commem. vol. : 191-202, 6 figs.

Significance of the natural endocasts of *Australopithecus* and *Plesianthropus* in studies of the evolution of the brain in anthropoids and man.

1949a. The cerebral sylvian angle in the Australopithecidae. *S. Afr. J. Sci.*, Johannesburg, **46**: 118-123, 2 figs.

A comparative study.

1949b. The brain casts of the recently discovered Plesianthropus skulls. *In* BROOM, ROBINSON, & SCHEPERS, 1949.

Comparisons with orang-utan, chimpanzee, gorilla, *Australopithecus africanus*, *Paranthropus robustus*, *Pithecanthropus*, *Sinanthropus*, *Homo neanderthalensis*, *H. sapiens*.

SCHLOSSER, M., 1903. Die fossilen Säugethiere Chinas nebst einer Odontographie der recenten Antilopen. *Abh. bayer. Akad. Wiss.*, München, **22**: 1-221, 14 pls., 32 text-figs.

Wadi Natrun fauna listed p. 212. Origin of hippopotamus and camel discussed p. 212.

Phiomia serridens = *Palaeomastodon*, milk dentition, p. 216.

1910. Über einige fossile Säugetiere aus dem Oligocän von Ägypten. *Zool. Anz.*, Jena, **35**: 500-508.

Palaeomastodon; *Megalohyrax* [Andr.] comprises *M. eocaenus* [Andr.], *M. minor* Andrews, *M. palaeotherioides* **sp. nov.**; *Sagatherium* Andrews comprises *S. minus* Andrews, *S. antiquum* Andrews, *S. magnum* Andrews, *S. majus* Andrews; *Pachyhyrax crassidentatus* **gen. et sp. nov.**; *Mixohyrax* **gen. nov.** comprises *M. andrewsi* **sp. nov.**, (*Megalohyrax minor* Andrews partim), *M. niloticus* **sp. nov.**, *M. suillus* **sp. nov.**; *Bunohyrax* **gen. nov.**, for *Geniohyus fajumensis* Andrews, *G. major* Andrews, and an unnamed sp.; *Geniohyus* Andrews comprises, *G. mirus* Andrews, *G. minutus* **sp. nov.**

[All **spp. nov.** above are **nomina nuda**, hence *Pachyhyrax* and *Mixohyrax* are **genera caelebia** diagnosed on p. 502. *Bunohyrax* is valid with *Geniohyrax fajumensis* Andrews as the type species (see also MATSUMOTO, 1926: 300).]

Pterodon africanus [Andr.], *Apterodon macrognathus* Andrews, *A. altidens* **sp. nov.**, *A. minutus* **sp. nov.** [of doubtful validity], *Ptolemaia lyonsi* Osborn.

Vampyravus orientalis **gen. et sp. nov.**, *Metolbodotes stromeri* **gen. et sp. nov.**

Moeripithecus markgrafi **gen. et sp. nov.**, *Parapithecus fraasi* **gen. et sp. nov.**, *Propliopithecus haeckeli* **gen. et sp. nov.**

[The invalid names listed above are valid in 1911, q.v., except that in the later paper *Geniohyus minutus* was described and figured as ? *Geniohyus micrognathus* **n. sp.**, thus the earlier name remains invalid. In the later paper, too, the generic name *Provampyrus* was substituted for *Vampyravus*. We have assumed that the description in 1910, although inadequate, suffices for the technical validity of *Vampyravus*; other workers may not agree.]

1911. Beiträge zur Kenntniss der Oligozänen Landsäugetiere aus dem Fayum: Aegypten. *Beitr. Paläont. Geol. Öst.-Ung.*, Wien, **24**: 51-167, 8 pls.

Descr. and figs. of *Propliopithecus haeckeli* **gen. et sp. nov.**, Parapithecidae **fam. nov.**, **Parapithecus fraasi* **gen. et sp. nov.**, **Moeripithecus markgrafi* **gen. et sp. nov.**, *Apidium phiomense* Osborn, anaptomorphid?, mixodectid?, **Metolbodotes stromeri* **gen. et sp. nov.**, *Provampyrus orientalis* **gen. et sp. nov.**, *Ptolemaia lyonsi* Osborn, *Metasinopa fraasi* Osborn, *Sinopa aethiopica* Andrews, *Apterodon macrognathus* Andrews, **A. altidens* **sp. nov.**, *Apterodon* sp., *A. minutus* **sp. nov.**, *Pterodon africanus* Andrews, Carnivora **gen. et sp. indet.**, *Palaeonictis*?, *Pachyaena*?, *Phiomys andrewsi* Osborn, *Metaphiomys beadnelli* Osborn, *Megalohyrax eocaenus* Andrews, *M. minor* Andrews, *M. palaeotherioides* **sp. nov.**, *Sagatherium minus* Andrews & Beadnell, *S. antiquum* Andrews & Beadnell, *S. magnum* Andrews, *S. majus*

SCHLOSSER, M. (*contd.*)

Andrews, *Pachyhyrax crassidentatus* gen. et sp. nov., *Mixohyrax andrewsi* gen. et sp. nov., *M. niloticus* sp. nov., *M. suillus* sp. nov., *Bunohyrax* gen. nov., *B. fajumensis* Andrews sp., *Bunohyrax* sp., *B. major* Andrews sp., *Geniohyus* aff. *mirus* Andrews?, ? *Geniohyus micrognathus* sp. nov., *Moeritherium andrewsi* sp. nov., *M.* cfr. *lyonsi* Andrews, *M. gracilis* Andrews, *Palaeomastodon*, *Arsinoitherium*.

[New names marked with an asterisk are valid in 1910, q.v. See also *Anthropologie*, 23: 417-423, 3 figs.]

SCHMIDT, M., 1913. Ueber Paarhufer der fluviomarinen Schichten des Fajum, odontographisches und osteologisches Material. *Geol. paläont. Abh.*, Jena, (N.F.) 11, 3: 155-264 (1-112), 9 pls., 22 text-figs.

Rhagatherium aegyptiacum Andrews, *Brachyodus gorringei* Andrews sp., *B. (Bothriogenys) fraasi* sp. nov., *B. rugulosus* sp. nov., *B. andrewsi* sp. nov., *B. parvus* Andrews sp., *Mixtotherium mezi* sp. nov.

Lower Oligocene: Fayûm, Egypt.

[Pp. and pls. with double set of numbers—(a) pp. 155-264, pls. XVII-XXV refer to complete volume; (b) pp. 1-112, pls. I-IX refer to Heft. The latter are those usually quoted.]

SCHWARZ, E., 1924. On the evolution and radiation of mammalian faunae. *Acta zool. Stockholm*, 5: 393-432.

Includes a review of various fossil mammalian faunas, indicating the Palaearctic, Oriental and African elements in each.

1932. Neue diluviale Antilopen aus Ostafrika. *Cbl. Min. Geol. Paläont.*, Stuttgart, 1932 B: 1-4, 2 figs.

Adenota recki sp. nov., *Tragelaphus spekii stromeri* sub-sp. nov., *Alcelaphus kattwinkeli* sp. nov., [Middle] Pleistocene: Olduvai, Tanganyika Territory.

1936. The Sterckfontein ape. *Nature*, London, 138: 969.

Australopithecus probably a pigmy gorilla. [Ref. is to *Plesianthropus transvaalensis* (Broom), also *A. africanus* Dart.] [*Anthropologie*, 47: 206.]

1937. Die fossilen Antilopen von Oldoway. *Wiss. Ergebn. Oldoway-Exped. 1913*, (N.F.) 4: 8-104, 3 pls., 4 text-figs.

Philantomba monticola sub-sp., *Tragelaphus scriptus* sub-sp., *T. spekii stromeri* Schwarz, *T. strepsiceros* sub-sp., *Taurotragus oryx pachyceros* sub-sp. nov., *Nesotragus moschatus* sub-sp., *Gazella gazella precursor* sub-sp. nov., *G. granti* sub-sp., *Phenacotragus* gen. nov., (type species *Adenota recki* Schwarz, 1932), *P. recki* (Schwarz), *Beatragus hunteri* Sclater, *Damaliscus angusticornis* sp. nov., *Alcelaphus kattwinkeli* Schwarz, *Gorgon taurinus semiticus* (Reck), *Hippotragus leucophaeus* sub-sp.

Middle Pleistocene.

[Contains *inter alia* new terminology for cones of mammalian teeth; new classification of antelopes; summary of fossil Bovidae of Africa; general discussions of Tragelaphinae, *Gazella*, and Antilopinae; important bibliography with comments.]

[*Anthropologie*, 48: 325.]

SCHWEINFURTH, G., 1886. Reise in das Depressionsgebiet im Umkreise des Fayum. *Z. Ges. Erdk.*, Berlin, 21: 96-149, 1 map.

Account of geology. Records of *Zeuglodon*, and an animal recalling swine or tapir, with many resemblances to *Choeropotamus* Cuvier, but twice the size [= *Moeritherium*?].

SCOTT, W. B., 1907. A collection of fossil mammals from the coast of Zululand. *Geol. Surv. Natal & Zululand*, 3rd and final rept., 253-262, 3 pls.

Hippopotamus ponderosus sp. nov., *Bubalus andersoni* sp. nov., Antilopidae incertae sedis 2 genera, *Opsiceros simplicidens* sp. nov., *Elephas (Loxodon) zulu* sp. nov.

Later Pliocene or early Pleistocene: coast of Zululand.

- SEELEY, H. G., 1891. On *Bubalus bainii* (Seeley). *Geol. Mag.*, London, (3) 8: 199–202, 1 fig.
Bubalus bainii **sp. nov.** "alluvial banks of the Moddar River."
- SENYÜREK, M. S., 1941. The dentition of *Plesianthropus* and *Paranthropus*. *Ann. Transv. Mus.*, Pretoria, 20: 293–302, 1 fig.
 Detailed study of plaster casts. Australopithecines structural but not direct ancestors of man.
- SERA, G. L., 1917. La testimonianza dei fossili di antropomorfi per la questione dell'origine dell'uomo. *Atti Soc. ital. Sci. nat.*, Milano, 56: 25–156, 7 figs.
 Affinities of *Propliopithecus*. [*Anthropologie*, 30: 159–162.]
1948. La posizione zoologica e la biologia delle cosiddette Australopithecinae. *Arch. zool. (ital.)*, Torino, 33: 121–181, 17 figs. English summary.
 Affinities of *Australopithecus*, *Plesianthropus*, and *Paranthropus* discussed.
- SHAPIRO, M. M. J., 1943. Fossil mammalian remains from Rankies, Kroonstad district, O.F.S. *S. Afr. J. Sci.*, Johannesburg, 39: 176–181.
 Lion?, *Equus quagga* Gmelin, *E. burchelli* Gray, *E. capensis* Broom, *Phacochoerus aethiopicus* Pallas, "*Bubalus*" cf. *bainii* Seeley, *Peloroceras helmei* Lyle, *Damaliscus* cf. *albifrons* (Burchell), *Connochaetes* sp.
 Late Upper Pleistocene.
 Hyaenid cf. *Crocuta crocuta* (Erxleben), *Equus capensis* [Broom], *E.* cf. *kuhni* Broom.
 Pleistocene: Wolmaranstad [Kroonstad, O.F.S.?).
1949. Comment on the dentition of *Australopithecus prometheus*. *S. Afr. J. Sci.*, Johannesburg, 2: 152–153.
 Significance of paramolar cusps on first and second lower molars.
- SHAW, J. C. M., 1937. Evidence concerning a large fossil Hyrax. *J. dent. Res.*, St. Louis, Mo., 16: 37–40, 1 fig.
Procavia transvaalensis **sp. nov.**
 Pleistocene?
1938. The teeth of the South African fossil pig (*Notochoerus capensis* syn. *meadowsi*) and their geological significance. *Trans. roy. Soc. S. Afr.*, Cape Town, 26: 25–37, 6 figs.
 Holotype of *N. capensis* Broom and *N. meadowsi* Broom discussed in comparison with three teeth referred to *N. capensis*.
 Pleistocene?: Sterkfontein.
- 1939a. Further remains of a Sterkfontein ape. *Nature*, London, 143: 117, 1 fig.
 Anthropoid left upper third molar descr. and fig. Not certainly referable to *Plesianthropus transvaalensis* or *Paranthropus robustus*.
- 1939b. Growth-changes and variations in wart-hog third molars and their palaeontological importance. *Trans. roy. Soc. S. Afr.*, Cape Town, 27: 51–94, 9 figs.
 Variations in third molar of *Phacochoerus africanus*. *P. laticolumnatus* van Hoepen = *P. africanus* or *P. aethiopicus*; *Stylochoerus compactus* van Hoepen = *P. aethiopicus* or *P. africanus*; *Synaptochoerus hieroglyphicus* van Hoepen = *P. africanus*; *Tapinochoerus* van Hoepen = *Notochoerus* Broom, and *T. modestus* van H. probably = *N. capensis* Br.; *Kolpochoerus sinuosus* van Hoepen = *N. capensis* Broom; *N. meadowsi* Broom = *N. capensis* Broom; *Metridiochoerus* Hopwood = *Notochoerus* Broom; *P. helmei*, *P. venteri*, *P. meiringi*, *P. dreyeri*, all in DREYER & LYLE, 1931, synonyms of either *P. aethiopicus* or *P. africanus*.

SHAW, J. C. M. (*contd.*)

1940. Concerning some remains of a new Sterkfontein Primate. *Ann. Transv. Mus.*, Pretoria, **20**: 145-156, 1 fig.

Fig., with detailed descr. and discussion, of a third upper molar tooth possibly representing "an early African human type": a contemporary of *Plesianthropus* and *Paranthropus*. Geological age unknown.

SHAW, J. C. M., & COOKE, H. B. S., 1941. New fossil pig remains from the Vaal River gravels. *Trans. roy. Soc. S. Afr.*, Cape Town, **28**: 293-299, 1 pl., 1 text-fig.

Mesochœrus (**gen. nov.**) *paiceae* (Broom).

Pleistocene (third phase of the Younger Gravels): Pniel Estate, opposite Barkly West, left bank of Vaal River.

Notochoerus broomi **sp. nov.**

Locality and horizon unknown.

Phacochoerus altidens **sp. nov.**

Pleistocene (middle phase of the Younger Gravels): Larsen's pits, Riverview Estate, nr. Windsorton.

SICKENBERG, O., 1931. Morphologie und Stammesgeschichte der Sirenen. I. Teil. Die Einflüsse des Wasserlebens auf die innere Sekretion und Formgestalten der Sirenen. *Palaeobiologica*, Wien, **4**: 405-444.

Discusses many species including *Eotherium aegyptiacum* Owen, *Eotherium* (*Eosiren*) *abeli* Sickenb., *Eotherium* (*Eosiren*) *libycum* Andr., *Protosiren fraasi* Abel.

Lower, Middle, and Upper Eocene: Egypt.

[*E. abeli* Sickenb. is a **nomen nudum**; as a valid species it appears in 1934, q.v.]

1934. Kontinentalverschiebung, Klimawechsel und die Verbreitung der tertiären landbewohnenden Säugetiere. *Biol. gen.*, Wien, **10**: 267-300, 4 figs.

General discussion fossil faunas of Egypt and S.W. Africa.

[*Eotherium abeli* here valid: see 1931.]

SIMPSON, G. G., 1928. Mesozoic Mammalia. XI. *Brancatherulum tendagurense* Dietrich. *Amer. J. Sci.*, New Haven, (5) **15**: 303-308.

Brancatherulum, a pantothere provisionally placed in the Paurodontidae.

Upper Jurassic: Tendaguru, Tanganyika Territory.

SMITH, G. ELLIOT, 1903. The brain of the Archaeoceti. *Proc. Roy. Soc.*, London, **71**: 322-331, 4 figs.

Endocranial casts of *Zeuglodon* sp. descr. and fig.

Eocene: Fayûm, Egypt.

1925. The fossil anthropoid ape from Taungs. *Nature, London*, **115**: 235.

[One of a series of notes by various authors under the same general title.

See also DUCKWORTH, 1925; KEITH, 1925a; WOODWARD, 1925.]

1927. *Essays on the evolution of man*. 2nd ed., xii + 195 pp., 50 figs., London.

Australopithecus africanus, discussion of affinities.

See also KEITH, SMITH, WOODWARD, & DUCKWORTH.

SOLIGNAC, M., 1924. Sur la présence de *Buffelus palaeindicus* Falc. dans le Quaternaire ancien de la région de Bizerte (Tunisie). *Bull. Soc. géol. Fr.*, Paris, (4) **24**: 176-192, 2 pls., 3 text-figs.

Oued Damous, W.S.W. of Bizerta, Tunisia.

SOLIGNAC, M. (*contd.*)

1925 (1923-1924). Note sur la faune recueillie par M. Débruge à Mechta-el-Arbi. *Rec. Not. Mém. Soc. archéol. Constantine*, **55**: 87-91.

(Not seen: *teste* ROMER, 1928.)

1927. Étude géologique de la Tunisie septentrionale. *Dir. Gén. Trav. publ., Serv. Mines, Carte géol. Tunis.*, Tunis: 756 pp., 2 pls., 231 text-figs.

FERRYVILLE.

Mastodon arvernensis Cr. & Job.

BIZERTA.

Mastodon arvernensis Cr. & Job.

DJEBEL MENZEL R'OUL.

Hipparion crassum Gerv., *Hippopotamus* sp.

EL ARIANA.

Hipparion sp.

All four localities of Pliocene age.

Oued DAMOUS.

Buffelus palaeindicus Falc.

Quaternary, Sicilian.

BIZERTA.

Elephas atlanticus Pom., *Hippopotamus amphibius*.

Quaternary, Tyrrhenian.

See also DEPÉRET, LAVAUDEN, & SOLIGNAC.

See also ROMAN & SOLIGNAC.

SOLLAS, W. J., 1925. The Taungs skull. *Nature, London*, **115**: 908-909, 4 figs.

Sagittal section of *Australopithecus* and chimpanzee compared. [*Anthropologie*, **35**: 605.]

1926. On a sagittal section of the skull of *Australopithecus africanus*. *Quart. J. geol. Soc., London*, **82**: 1-11, 11 figs.

Comparison with skulls of orang, chimpanzee and man. [*Anthropologie*, **37**: 158.]

STEFANESCU, S., 1919. Sur la phylogénie de l'*Elephas africanus*. *C.R. Acad. Sci. Paris*, **168**: 97-99.

Ancestral forms directly descended from bunolophodont mastodonts.

1924. Sur la phylogénie des éléphants. *C.R. Acad. Sci. Paris*, **178**: 1836-1839.

Position of *E. africanus* and other spp.

STEHLIN, H. G., & GRAZIOSI, P., 1935. Ricerche sugli asinidi fossili d'Europa. *Mém. Soc. paléont. Suisse, Bâle*, **56**: 1-73, 10 pls., 14 text-figs.

Upper and lower dentition *Equus (Asinus) somaliensis* Noack, *E. (A.) africanus* Fitzinger figd. nat. size.

STRAUS, W. L., JR., 1948. The humerus of *Paranthropus robustus*. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) **6**: 285-311, 3 pls., 1 text-fig.

Detailed statistical analysis based on a cast of a distal end found at Kromdraai.

"No more hominid than anthropoid."

"There is no justification for the [claim] . . . that the arms of the Australopithecines were not used for walking or climbing." [*Anthropologie*, **55**: 318-321.]

1950. On the zoological status of *Telanthropus capensis*. *Amer. J. phys. Anthropol.*, Philadelphia, (N.S.) **8**: 495-498.

Taxonomic value of the mylohyoid groove discussed. Its use in the "argument for the generic separation of *Telanthropus* from *Paranthropus* . . . unjustifiable."

- STROMER, E., 1902. Wirbeltierreste aus dem mittleren Pliozän des Natrontales und einige subfossile und rezente Säugetierreste aus Ägypten. *Z. dtsh. geol. Ges.*, Berlin, **54**: Briefl. Mitt.: 108-115, 1 fig.
 Cuboid of a camel descr. and fig.
 Pliocene: Gart el Moluk, Wadi Natrun, Egypt.
- 1903a. Einiges über den Bau und die Stellung der Zeuglodonten. *Monatsber. dtsh. geol. Ges.*, Berlin, **55**: 36-40, 1 fig.
Zeuglodon osiris Dames, descr. and fig. of skull.
 Middle Eocene: Egypt.
- 1903b. Afrika als Entstehungszentrum für Säugetiere. *Monatsber. dtsh. geol. Ges.*, Berlin, **55**: 61-67.
 Discussion of mammalian faunas of Europe and N. Africa.
- 1903c. Zeuglodon-Reste aus dem oberen Mitteleocän des Fajûm. *Beitr. Paläont. Geol. Öst.-Ung.*, Wien u. Leipzig, **15**: 59-100; 4 pls.
Zeuglodon zitteli sp. nov., *Z. osiris* Dames.
 Comparison with European and North American forms.
 Bed II.5a of Blanckenhorn [1900], q.v. = Carolia Beds of the Qasr es Saga [= Eocene fluvio-marine beds].
- 1903d. Bericht über eine von den Privatdozenten Dr Max Blanckenhorn und Dr Ernst Stromer von Reichenbach ausgeführte Reise nach Ägypten. *S.B. bayer. Akad. Wiss.*, München, **32**: 341-352, 1 fig.
Zeuglodon osiris Dames.
 Lower Mokattam beds, Eocene: N. of Dîmeh, Fayûm, Egypt.
- [1903.] Zeuglodonten-Reste aus dem oberen Mitteleocän des Fayum. *Abh. bayer. Akad. Wiss.*, München, **32**.
 [Apparently a ghost: see 1903c.]
1904. Eine geologische Forschungsreise in die Libysche Wüste. *Ber. senckenb. naturf. Ges.*, Frankfurt a.M., **1904**: 109-110.
 Lecture abstract.
1906. Über die Bedeutung der fossilen Wirbeltiere Afrikas für die Tiergeographie. *Verh. dtsh. zool. Ges.*, Leipzig, **16**: 204-218.
 General discussion. Comparative table of N. African and European faunas, pp. 212-218.
- 1907a. Geographische und geologische Beobachtungen im Uadi Natrûn und Fâregh in Ägypten. *Abh. senckenb. naturf. Ges.*, Frankfurt a.M., **29**: 69-96, 1 pl., map.
 General geology: fossiliferous horizons.
- 1907b. Fossile Wirbeltier-Reste aus dem Uadi Fâregh und Uadi Natrûn in Ägypten. *Abh. senckenb. naturf. Ges.*, Frankfurt a.M., **29**: 99-132, 1 pl., 3 text-figs.
Crytodelphis sulcatus Gervais, *Brachyodus africanus* Andrews, *Mastodon* sp.
 Lower Miocene: Uadi Fâregh.
Hippopotamus (*Tetraprotodon*) *hipponensis* Gaudry, [*Sus* sp.], [*Camelus* sp.], *Libytherium*?, antelope, *Hipparion* sp., *Mastodon* sp., sirenian, seal, otter, wolf?, machaerodont, *Lepus* sp.
 Middle Pliocene: Uadi Natrûn.
- 1907c. Geologische Beobachtungen im Fajûm und am unterem Niltale in Ägypten. *Abh. senckenb. naturf. Ges.*, Frankfurt a.M., **29**: 135-148, 1 pl.
 Collation and amplification of ANDREWS, 1906; BEADNELL, 1905; BLANCKENHORN, 1900, 1903 (1902).

STROMER, E. (*contd.*)

1908a. Die Urwale (Archaeoceti). *Anat. Anz.*, Jena, **33**: 81–88, 1 pl.

Discussion of affinities. *Zeuglodon* (*Dorudon*) *osiris* Dames figd.

Upper Eocene: Egypt.

1908b. Die Archaeoceti des ägyptischen Eozäns. *Beitr. Paläont. Geol. Öst.-Ung.*, Wien, **21**: 106–177, 4 double pls.

Eocetus schweinfurthi Fraas, *Zeuglodon osiris* Dames, *Z. zitteli* Stromer, *Z. isis* Beadnell, *Z. cfr. brachyspondylus* Joh. Müller, *Prozeuglodon atrox* Andrews.

General review of the Archaeoceti.

1910. Neue Forschungen über fossile lungenatmende Meeresbewohner. *Fortschr. naturw. Forsch.*, Berlin, **2**: 83–114, 2 pls., 13 text-figs.

Aquatic adaptation in *Zeuglodon*, *Protocetus*, *Moeritherium*, *Eosiren*, *Eotherium* and other genera.

1911. Die einstige Verbreitung afrikanischer Säugetiere. *Naturw. Wochenschr.*, Berlin, (2) **10**: 814–816, 1 fig.

General discussion. Incidental references to *Dorcatherium*, *Hyaemoschus*, *Genetta*, *Felis leo spelaea*, *Hyaena spelaea*, *H. crocuta*, *H. striata*, *Orycteropus*, *Macacus*, *Chrysochloris*.

1913. Mitteilungen über die Wirbeltiere aus dem Mittelplozän des Natrontales (Ägypten). *Z. dtsh. geol. Ges.*, Berlin, **65**: 350–372, 3 pls.

Libypithecus markgrafi gen. et sp. nov., *Pristiphoca* aff. *occitana* P. Gervais, *Lutra libyca* sp. nov., *hyaena*, *Machaerodus* aff. *aphanistus* Kaup, descr. and figs.

[Parts 1, 2 of a short series: for pt. 3 see 1914.]

1914. Mitteilungen über Wirbeltierreste aus dem Mittelplozän des Natrontales (Ägypten). 3. Artiodactyla: Bunodontia: Flusspferd. *Z. dtsh. geol. Ges.*, Berlin, **66**: 1–33, 3 pls.

Dentition of *Hippopotamus hippoensis* descr.

Sp. restricted to M. Pliocene of N. Africa and affords no evidence concerning the phylogeny of the genus. [For pts. 1, 2, see 1913.]

1916. Die Entdeckung und die Bedeutung der Land- und Süßwasser-bewohnenden Wirbeltiere im Tertiär und in der Kreide Ägyptens. *Z. dtsh. geol. Ges.*, Berlin, **68**: 397–425.

Review of faunas; tables of distribution in time; classified bibliography.

1920. Mitteilungen über die Wirbeltierreste aus dem Mittelplozän des Natrontales (Ägypten). 5. Nachtrag zu 1. Affen. 6. Nachtrag zu 2. Raubtiere. *S.B. bayer. Akad. Wiss.*, München, **1920**: 345–370, 1 pl.

Aulaximus libycus sp. nov., *Libypithecus markgrafi* Stromer, *Papio* sp. indet., *Lutra* aff. *hessica* Lyd., *L.* aff. *capensis* Schinz.

1921. Untersuchung der Hüftbeine und Hüftgelenke von Sirenen und Archaeoceti. *S.B. bayer. Akad. Wiss.*, München, **1921**: 41–59, 6 figs.

Eosiren libyca Andrews.

Upper Eocene, Quasr el Sagha beds: Birket el Qurun, Fayûm, Egypt.

1922 (1921). Erste Mitteilung über Tertiäre Wirbeltier-Reste aus Deutsch-Südwestafrika. *S.B. bayer. Akad. Wiss.*, München, **1921**: 331–340.

Rhinoceros size of *R. simus*, antelope, *Diamantohyus africanus* gen. et sp. nov., *Protypotheroides beetzi* gen. et sp. nov., rodents indet., *Neosciuromys africanus* gen. et sp. nov., *Diamantomys luederitzi* gen. et sp. nov., *Pomonomys dubius* gen. et sp. nov.

Lower or Middle Miocene: Langental, Lüderitz Land, S.W. Africa.

[Preliminary diagnoses: see also 1924 (1923), 1926.]

STROMER, E. (*contd.*)

1923. Bemerkungen über die ersten Landwirbeltier-Reste aus dem Tertiär Deutsch-Südwestafrikas. *Paläont. Z.*, Berlin, **5**: 226–228.

Summary account of Lüderitz Bay fauna.

Lower Miocene: Coastal area S. of Lüderitz Bay.

- 1924 (1923). Ergebnisse der Bearbeitung mitteltertiärer Wirbeltier-Reste aus Deutsch-Südwest-Afrika. *S.B. bayer. Akad. Wiss.*, München, **1923**: 253–270.

Metapterodon kaiseri gen. et sp. nov., creodont gen. et sp. indet., rhinoceros gen. et sp. indet., *Diamantohyus africanus* Stromer, "Aff. *Palaeochoerus* Pomel, subg. *Propalaeochoerus* Stehlin sp. indet.", cfr. *Strogulognathus sansaniensis* Filhol, *Propalaeoryx austroafricanus* gen. et sp. nov., *Prohyrax tertiaris* gen. et sp. nov., *Myohyracoidea* sub-ordo nov., *Myohyrax oswaldi* Andrews, *M. doederleini* sp. nov., *Protypotheroides beetzi* Stromer, *Austrolagomys inexpectatus* gen. et sp. nov., *Parapedetes namaquensis* gen. et sp. nov., *Bathyergoides neotertiarius* gen. et sp. nov., *Neosciuromys africanus* Stromer, *Phiomys humilis* gen. et sp. nov., aff. *Phiomys andrewsi* Schlosser (*non* Osborn), *Diamantomys luederitzi* Stromer, *Pomonomys dubius* Stromer.

Lower Miocene, or transition from Upper Oligocene to Lower Miocene: S. of Lüderitz Bay. [Preliminary descriptions only: see also 1922 (1921), 1926.]

1926. Reste land- und süßwasser-bewohnender Wirbeltiere aus den Diamantenfeldern Deutsch-Südwestafrikas. In KAISER, E., *Die Diamantenwüste Südwestafrikas*, **2**: vii + 535 pp., 48 pls., 32 stereo. photo., 99 text-figs. Berlin.

Metapterodon kaiseri gen. et sp. nov., rhinoceros indet., *Diamantohyus africanus* Stromer; aff. *Palaeochoerus* Pomel, subg. *Propalaeochoerus* Stehlin sp. indet.; cfr. *Strogulognathus sansaniensis* Filhol; *Propalaeoryx austroafricanus* gen. et sp. nov.; *Artiodactyla* indet.; *Prohyrax tertiaris* gen. et sp. nov.; *Myohyrax doederleini* sp. nov.; *M. oswaldi* Andrews; *Protypotheroides beetzi* Stromer; *Myohyracoidea* sub-ordo nov. for *Myohyracidae* Andr. (= *Myohyrax* + *Protypotheroides*) placed immediately next to *Typotheria* and *Hyracoidea*; *Austrolagomys inexpectatus* gen. et sp. nov.; *Parapedetes namaquensis* sp. nov.; *Bathyergoides neotertiarius* sp. nov.; *Neosciuromys africanus* Stromer; *Phiomys humilis* sp. nov.; cfr. *Phiomys andrewsi* Schlosser (*non* Osborn); *Diamantomys luederitzi* Stromer; *Pomonomys dubius* Stromer.

Lower Miocene: various localities.

[See also 1924 (1923), 1922 (1921); most "new" genera and spp. date from former.]

- 1932 (1931)a. Reste Süßwasser und Land bewohnender Wirbeltiere aus den Diamantfeldern Klein-Namaqualandes (Südwestafrika). *S.B. bayer. Akad. Wiss.*, München, **1931**: 17–47, 2 pls.

Enhydriodon africanus sp. nov., *Hyaena namaquensis* sp. nov., ?*Herpestes* Illiger, ?*Genetta* Cuvier, *Muridae* gen. indet., antelope gen. indet.

Middle Pliocene: Klein Zee, S. of Port Nolloth, on N. bank of Buffalo River.

- 1932 (1931)b. *Palaeothentoides africanus*, nov. gen., nov. spec., ein erstes Beuteltier aus Afrika. *S.B. bayer. Akad. Wiss.*, München, **1931**: 177–190, 2 figs.

Diagnosis and designation of type-specimen p. 185.

Probably Middle Pliocene: Klein Zee, S. of Port Nolloth, Little Namaqua Land, S.W. Africa.

- STUDER, T., 1899 (1898). Ueber fossile Knochen vom Wadi-Natron, Unteregypen. *Mitt. naturf. Ges. Bern*, **1898**: 72–77.

Fragments of unidentified sirenian, hippopotamus or anthracothere, large ruminant.

Possibly Upper Oligocene *fide* Blanckenhorn: Manuk, between Wadi Natrun and Wadi Taregh [= Faregh]; also E. margin of W. Natrun.

SUESS, M., 1932. Sur la présence de gastropodes et de vertébrés dans le grès de Bou Hanifia, feuille de Mascara (département d'Oran). *C.R. Acad. Sci. Paris*, 194: 1970-1972.

Hipparion, type of *gracile*; *Achtiaria coelophrys* Rodl. & Weith.; gazelle; deer; hyaena; *Rhinoceros*.

Pontian [Lower Pliocene].

THOMAS, PH., 1875a. Ossements du *Bubalus antiquus* découverts à Djelfa, en Algérie (Lettre à M. P. Gervais). *J. Zool.*, Paris, 4: 72-78, 1 pl.

Detailed measurements.

[Abstract by Gervais of the original letter.]

1875b. Sur les débris fossiles (*Bos antiquus*) découverts près de Djelfa. *Bull. Soc. Climatol.*, Alger, 12: 65-70.

In deposits of historic period or slightly earlier.

1876. La découverte du *Bos* (*Bubalus*) *antiquus*. *Matér. Hist. prim. nat. Homme*, Paris, 11: 46.

Oldest alluvium of the Oued Djelfa.

1877. Le tumulus d'Aïn M'lila. *Bull. Soc. Climatol.*, Alger, 13: 1-9.

Antilope bubalis Pallas, *A. dorcas* Pallas, *Bos* horncores, "bœuf de taille colossale," *Bos taurus*, Linné.

[*Bull.* 13 consists of 3 parts, each with separate pagination.]

1879a. Note sur quelques équidés fossiles des environs de Constantine. *Rev. Sci. nat.*, Montpellier, 8 (N.S., 1): 335-351, 1 geol. section.

Mastodon, pig near to wart-hogs.

Old lacustrine (Sahélian?).

Hipparion, *Equus caballus*, antelopes and bovines: perhaps also *Hippopotamus hipponensis* Gaudry.

Fluvio-lacustrine Pliocene: [near Bône].

Large oxen resembling *Bos taurus primigenius*, *Bubalus antiquus* Duvernoy, horses, antelopes.

Recent Quaternary.

[This paper, reset and repaged 1-17, was bound in at the end of and issued with *Bull. Soc. Sci. phys. nat. Alger*, 16, 3^e et 4^e trim., 1879, from which it is sometimes quoted.

Rev. Sci. nat. changed from Sér. 1 to Sér. 2 in middle of vol. quoted! Sheet signatures are: VIII, 1-10 (i.e. pp. 1-160); vol. no. then omitted, signatures being 11-19 (i.e. pp. 161-304). Remainder of volume (i.e. pp. 305-583) with signatures, 2^e sér., tom. I, 20-38; index sheet without signature. Plates numbered consecutively; pl. 1, is vol. 8, pls. 2-5 are N.S., 1.

Most convenient method of quoting the vol. is as above.]

1879b. Le *Rhinocéros tichorhinus* de Chetma (près Biskra). *Bull. Soc. Sci. phys. nat.*, Alger, 16: 3^e et 4^e trim. 75-78.

[A discussion of former faunas and climates based on false premisses.]

1881. Recherches sur les bovidés fossiles de l'Algérie. *Bull. Soc. zool. Fr.*, Paris, 6: 92-136, 2 pls.

Bubalus antiquus Duvernoy, *Bos primigenius mauritanicus* [sub-sp. nov.]

Quaternary: Algeria.

1882 (1881). Recherches sur les bovidés fossiles de l'Algérie. *C.R. Ass. franç. Av. Sci.*, Paris, 10: 698-700.

Summary of 1881.

THOMAS, PH. (*contd.*)

1884a. Recherches stratigraphiques et paléontologiques sur quelques formations d'eau douce de l'Algérie. *Mém. Soc. géol. Fr.*, Paris, (3) 3, 2: 1-51, 4 pls., synopt. tabl.

1. *Antilope* indet., *Mastodon* indet.

Mio-pliocene, fluvio-lacustrine clays and lignites: Smendou.

2. Broken and indeterminate bones of large mammals.

Mio-pliocene, fluvio-lacustrine series: near Constantine.

3. *Hippopotamus* indet., *Sus phacochoeroides* sp. nov., *Hipparion gracile* Kaup.

Lower Pliocene, lacustrine marls and travertines: Aïn-el-Bey and Aïn-el-hadji-Baba, nr. Constantine.

4. *Cynocephalus atlanticus* sp. nov., *Bubalus antiquus* Duvern., *Antilope tournouëri* sp. nov., *Palaeoreas gaudryi* sp. nov., *Gazella atlantica* sp. nov., *Sus* indet., *Hippopotamus hipponensis* Gaudry, *Hippopotamus* indet., *Hipparion gracile* Kaup, *Equus stenonis*, *Elephas meridionalis* Nesti, *Rhinoceros* indet.

Upper Pliocene, fluvio-lacustrine series: Aïn-Jourdel and Aïn-el-Bey, nr. Constantine; Saint-Arnaud, nr. Sétif.

5. *Hipparion* cf. *H. gracile* Kaup, *Antilope* indet., *Mus rattus* L.

Upper Pliocene, fluvio-marine or estuarine series: Kharoubi wells, nr. Oran.

6. *Bos primigenius* Bojanus, *Ovis tragelaphus* Geoff., *Antilope* indet. nov. sp., *Hippopotamus amphibius* L., *Sus* indet., *Equus stenonis*, *Rhinoceros* indet.

Older Quaternary, high level diluvium and travertine: neighbourhood of Constantine and Miliana.

7. *Bubalus antiquus* Duvern., *Hippopotamus* indet., *Elephas antiquus* ("d'après M. Pomel").

Older Quaternary, argillo-gypseous conglomerate and detrital deposits: no definite locality.

8. *Rhinoceros*, near *R. tichorhinus* Cuvier.

Upper Quaternary: muds of the chotts, sebkas and dayas; dunes of the Erg region; sands of the oasis of Chetma.

9. *Bubalus antiquus* Duvernoy, *Bos primigenius mauritanicus* sp. [sub-sp.] nov., *Alcelaphus bubalis* Pallas, *Gazella corinna* Pallas, *Ovis tragelaphus* Geoffrey, *Ovis aries* Demarets [sic!], *Camelus* nr. *C. dromedarius* L. nov. sp. [non-descr.], *Equus africanus* Sanson, *E. asinus atlanticus* sp. [sub-sp.] nov., *Sus* indet., *Hippopotamus amphibius* L., *Elephas atlanticus* Pomel.

Upper Quaternary, low-level alluvium: banks of Oued Djelfa and Oued Seguen, sands of Aïn-Ternifine.

10. *Elephas africanus* ("d'après M. Pomel").

Upper Quaternary: raised beaches, no definite locality.

[See also 1881.]

1884b. Sur le *Camelus dromedarius* Linné, trouvé à l'état fossile en Algérie. *Mém. Soc. géol. Fr.*, Paris, (3) 3, 2: 38.

[Sic in BLONDEL, 1, p. 183, but a ghost. Reference is to 1884a, q.v.]

1884c. Sur quelques formations d'eau douce tertiaires d'Algérie. *C.R. Acad. Sci., Paris*, 98: 311-314.

Sus phacochoeroides, hippopotamus non det., *Hipparion* cf. *gracile*.

Pliocene: Aïn-el-Bey, near Constantine.

Large monkey cf. *Cynocephalus porcarius*, *Bubalus antiquus* (Duvern.), *Palaeoreas gaudryi*, *Antilope tournouëri*, *Gazella atlantica*, *Hippopotamus* intermediate between *H. major* and *H. amphibius*, *Hipparion* = *H. gracile* (Kaup) var.?, *Equus stenonis*, *Elephas meridionalis* (Nesti), *Rhinoceros* indet. [post-Pliocene]: neighbourhood of Constantine.

THOMAS, PH. (*contd.*)

1884d. Sur quelques formations d'eau douce quaternaires d'Algérie. *C.R. Acad. Sci., Paris*, 98: 381-383.

1. Large bovine indet., *Antilope gaudryi*, *Ovis tragelaphus* (Geoffr.), *Hippopotamus amphibius* (L.), *Rhinoceros* indet., *Equus stenonis*.

Old Quaternary: neighbourhood of Constantine.

2. *Elephas africanus*, *Bubalus antiquus*, *Hippopotamus amphibius*.

Recent Quaternary: Plain of the Mitidja.

3. *Elephas atlanticus*, hippopotamus, large ruminants, horse.

Post-Quaternary: sands of Aïn-Ternifine.

4. *Bubalus antiquus* Duvernoy, *Bos primigenius mauritanicus*, *Antilope corinna* Pallas, *Alcelaphus bubalis* Pallas, *Ovis aries*, *O. tragelaphus*, camel, *Equus* cf. *africanus* (Sanson), *E. asinus atlanticus*.

Recent Quaternary: near source of Oued-Djelfa, Oued Seguen, affluent of Rummel.

5. *Rhinoceros tichorhinus* [tooth restored by Gaudry].

Recent Quaternary: Oasis of Chetma, nr. Biskra.

1886. Notes additionnelles sur les vertébrés fossiles de la province de Constantine. *Bull. Soc. géol. Fr., Paris*, (3) 15: 139-143.

In three sections thus:

1. Coexistence de l'*Equus Stenonis* et de l'*Hipparion gracile* dans les calcaires lacustres anciens des environs de Constantine.

Pliocene [= Lower Pleistocene]: near Guelma.

2. Dromadaire quaternaire de l'Oued Seguen, département de Constantine.

Associated with *Bubalus antiquus* and *Bos primigenius mauritanicus*.

3. Caractères ostéologiques du crâne d'un vieux *Bubalus antiquus* Duvernoy, conservé au Musée de Constantine.

Alluvial deposits of the Oued Seguen.

TILHO, J., & ARAMBOURG, C., 1938. Sur la découverte par M. Stéphan Desombre, d'un éléphant fossile au centre du Sahara. *C.R. Acad. Sci., Paris*, 206: 1775-1779, map, 1 fig.

Elephas comparable to *E. atlanticus* Pomel.

[Late Pleistocene]: N.W. of Bilma oasis, 5-8 km. from the rocks of Gingérem.

TOBIANSKY, D. See DALE & TOBIANSKY.

TOBIEN, H., 1936. Mitteilungen über Wirbeltierreste aus dem Mittelpliocän des Natrontales (Aegypten). 7. Artiodactyla: A. Bunodontia: Suidae. *Z. dtsh. geol. Ges.*, Berlin, 88: 42-53, 2 pls.

Sivachoerus giganteus (Falc. & Cautl.), Suidae gen. et sp. indet.

Middle Pliocene: Gart-el-Moluk, Wadi Natrûn.

[For other papers in this series see STROMER, 1913, 1914, 1920. *Fortschr. Paläont.*, 1: 318.]

TOMMASINI, P., 1886. La sablière de Ternifine. *Bull. Soc. Géogr. Oran*, 6: 51-52.

Elephas atlanticus Pomel, hippopotamus, rhinoceros, horse, two large ruminants, a big feline.

Oldest Quaternary (associated with a chellean hand-axe): near Palikao, Algeria.

[N.D.L.R. in a note on p. 53 says that four molars of *E. atlanticus*, one molar of rhinoceros, three teeth of lion, several bones and molars of *Equus caballus*, and six quartzite hand-axes of chellean type are in the museum at Oran.]

See also PALLARY & TOMMASINI.

- TOPINARD, P., 1893. De l'évolution des molaires et prémolaires chez les Primates et en particulier chez l'homme. *Anthropologie*, Paris, 3: 641-710, 8 figs.
[*Gorilla*, *Pongo*, *Pan*], gibbon, [*Papio*, *Cynocephalus*, *Macaca*, *Ceropithecus*]. Recent spp. only.
- TOURNOUËR, A., 1878a. Découverte de dents d'Hipparion dans la formation d'eau douce de la province de Constantine. *C.R. Soc. géol. Fr.*, Paris, 18 févr., fasc. 4: 2-3 (observations de A. Pomel).
[Not seen: *teste* BLONDEL, 1, p. 185.]
- 1878b. Découverte de dents de *Hipparion* dans la formation tertiaire supérieure d'eau douce de la province de Constantine. *Bull. Soc. géol. Fr.*, Paris, (3) 6: 305.
Hipparion gracile from a trench at Aïn Jourdel, S.E. of Constantine; *det.* A. Gaudry.
- 1878c. Nouvelle étude des marnes à Hipparion de la région d'Oran. *C.R. Soc. géol. Fr.*, Paris, 17 juin, fasc. 13: 1.
[Not seen: *teste* BLONDEL, 1, p. 185.]
- 1879a. Sur une dent d'*Equus stenonis* (?) d'Aïn Jourdel, près de Constantine. *C.R. Soc. géol. Fr.*, Paris, 23 juin, fasc. 16: 60.
[Not seen: *teste* BLONDEL, 1, p. 185.]
- 1879b. Sur une dent d'*Equus Stenonis* (?) d'Aïn Jourdel, près de Constantine. *Bull. Soc. géol. Fr.*, Paris, (3) 7: 744.
Exhibition of specimen. No descr., no fig.
- V[ALLOIS], H. V., 1935. La dentition de l'*Australopithecus*. *Anthropologie*, Paris, 45: 212-213.
Critical review of DART, 1934.
See also ARAMBOURG, BOULE, VALLOIS, & VERNEAU.
- VAN STRAELEN, V., 1924. Sur les premières restes de phacochères fossiles recueillies au Congo Belge. *Bull. Acad. Belg. Cl. Sci.*, Bruxelles, (5) 10: 360-365, 1 fig.
Phacochoerus congolensis sp. nov.
Pleistocene: about 60 km. W. of Bukama (Katanga).
- VAUFREY, R., 1928. Sur l'*Aprotodon smith-woodwardi* Foster-Cooper et la phylogénie des hippopotames. *Bull. Soc. géol. Fr.*, Paris, (4) 28: 227-239.
Hippopotamus hipponensis Gaudry, *H. pantanellii* Joleaud, *H. (Choeropsis) liberiensis* Morton.
[*Anthropologie*, 49: 458-461.]
1929. Les Éléphants nains des îles méditerranéennes et la question des isthmus pléistocènes. *Arch. Inst. Pal. hum.*, Paris, Mém. 6: 1-220, 9 pls., 45 text-figs.
Comparison of faunas with those of N. Africa.
Revised list fossil mammals Algeria and Tunisia.
- V[AUFREY], R., 1937. Le crâne de Sterkfontein: critique de M. E. Schwarz. *Anthropologie*, Paris, 47: 206.
Summaries of SCHWARZ, 1936; BROOM, 1937a; BENNEJEANT, 1936, qq.v.
1939. Les anthropoïdes fossiles d'Afrique méridionale et l'origine de l'homme. *Anthropologie*, Paris, 49: 200-201.
Review of GREGORY & HELLMAN, 1939b.

VAUFREY, R. (*contd.*)

1940. Le néolithique de tradition capsienne au musée d'Oran. *Bull. Soc. Géogr. Oran*, **61**: 82-96, 2 pls., 2 text-figs.

Archaeological: many references to literature. Faunal lists:

1. GROTTTE DU CUARTEL.

Small horse, boar, *Bos primigenius*, *B. ibericus*, [*Alcelaphus bubalis*], mouflon, [*Gazella*].

2. GROTTTE DU NOISEUX.

Numerous bones of a large ox.

3. GROTTTE DE LA FORÊT.

Boar, [*Bos primigenius*, *B. ibericus*], antelopes.

4. GROTTTE DU POLYGONE.

Equus asinus?, leopard, fox, jackal, mongoose, genet, boar, wart-hog, large bovine, antelopes.

5. GROTTTE DES TROGLODYTES.

Bos primigenius, *B. ibericus*, various living spp.

6. GROTTTE DE LA GUETHNA.

Rhinoceros, hyaena, caracal, mongoose, boar, mouflon, [*Alcelaphus bubalis*, *Gazella*], porcupine.

7. GROTTTE DE L'OUED SAIDA.

Equus caballus (*mauritanicus*?), *E. asinus* (?), boar, [*Bubalus antiquus*], large and small oxen [*B. primigenius* and *B. ibericus*?], [*Alcelaphus bubalis*], antelopes, lion, caracal, serval, hyaena, mongoose, porcupine, gerbil, rabbit, hare.

8. RHAR OUM EL FERNAN.

Fauna, approaching preceding, includes *Equus mauritanicus* (*E. cf. burchelli*).

9. GROTTTE D'AÏN GUEDDARA.

Lion, leopard, *Alcelaphus bubalis*, *Gazella*. [DOUMERGUE, 1925, added boar and porcupine.]

1947. Olorgesailie. Un site acheuléen d'une exceptionnelle richesse. *Anthropologie*, Paris, **51**: 367.

Elephas antiquus, *Sivatherium olduvaiensis*, *Hippopotamus gorgops*, *Notochoerus dietrichi*, *Simopithecus leakeyi*.

65 km. W.S.W. of Nairobi, Kenya Colony.

1948a. Les anthropoïdes fossiles de Rusinga. Age du crâne d'Eyassi. *Anthropologie*, Paris, **52**: 177-180.

Commentary on HOPWOOD, 1933b, MACINNES, 1943, and others.

1948b. Les progrès de la paléontologie humaine en Afrique orientale. *Nature*, Paris, **76**: 144-149, 5 figs.

General summary and discussion with numerous references to literature. Figures of *Proconsul africanus*, *Notochoerus dietrichi*.

See also GOBERT & VAUFREY.

VERNEAU, R. See ARAMBOURG, BOULE, VALLOIS & VERNEAU.

VUILLEMOT, G., 1937. La grotte d'el-Bachir (Bou-Sfer). *Bull. Soc. Géogr. Oran*, **58**: 235-244, section, 42 figs.

Bos opisthonomus, *Sus scrofa*, *Boselaphus bubalus*, *Ovis tragelaphus*, *Gazella cuvieri*.

Associated culture could be either upper paleolithic or neolithic in type.

- WAYLAND, E. J., 1931 (1930). *Uganda Protectorate. Annual Report of the Geological Survey Department.* 44 pp., 1 pl., map. Entebbe.
 "The well-known fossiliferous beds at Karungu described by Oswald [1914, *Quart. J. geol. Soc., London*, 70: 158] and those of Rusinga Island (0° 24' S. by 34° 10' E.) and on the opposite mainland discovered by Wayland." [p. 6: publ. 18: vi: 1931.]
 Miocene.
1932. *Deinotherium* in the Pleistocene. *Nature, London*, 129: 24.
 Significance of finds at Olduvai, Tanganyika Territory.
- WAYLAND, E. J., & GROVES, A. W., 1931. *Report on a geological reconnaissance of southern Kavirondo.* Nairobi, Government Printer, 56 pp., 1 pl., 9 text-figs.
 Miocene beds on Rusinga Island briefly described: first mention of vertebrate fossils on the island (pp. 24-25).
- WEBER, M., 1904. *Die Säugetiere. Einführung in die Anatomie und Systematik der recenten und fossilen Mammalia.* xii + 866 pp., 567 figs. Jena.
 A systematic treatise.
Moeritherium p. 726; *Palaeomastodon* p. 727.
- 1927-1928. *Die Säugetiere u.s.w.* Zweite Auflage, 1: xvi + 444 pp., 316 figs., 1927; 2: xxiv + 898 pp., 573 figs., 1928. Jena.
 Fossil genera by O. ABEL.
 Many N. Afr. gen. and spp.; figs of:
Protocetus atavus Fraas, *Zeuglodon osiris* Dames, *Z. isis* Andrews, *Miohyrax niloticus* Schlosser, *Geniohyus mirus* Andrews, *Arsinoitherium zitteli* Andrews [recte Beadnell], *Moeritherium lyonsi* Andrews, *Barytherium grave* Andrews, *Palaeomastodon beadnelli* Andrews, *Eotherium aegyptiacum* Owen, *Protosiren fraasi* Abel, *Eosiren libyca* Andrews, *Bothriogenys fraasi* Schmidt, *Parapithecus fraasi* Schlosser, *Apidium phiomense* Osborn, *Propliopithecus haeckeli* Schlosser, *Libypithecus markgrafi* Stromer.
- WEIDENREICH, F., 1948. About the morphological character of the Australopithecinae skull. *Roy. Soc. S. Afr., Spec. Publ.*, Robert Broom commem. vol., pp. 143-152, fig.
 Australopithecinae are apes with certain additional human features.
- WELLS, L. H., 1939. The endocranial cast in recent and fossil Hyraces (Procaviidae). *S. Afr. J. Sci.*, Johannesburg, 36: 365-373, 1 pl., 2 text-figs.
 Endocasts of *Procavia transvaalensis* Shaw, and "Hyrax" sp.
 Early or Middle Pleistocene: Krugersdorp, Transvaal.
1940. Africa and the ancestry of man. *S. Afr. J. Sci.*, Johannesburg, 37: 58-77.
 Relationships of *Parapithecus*, *Propliopithecus*, *Limnopithecus*, *Proconsul*, *Australopithecus*, *Plesianthropus*, *Paranthropus*, also European and Asiatic genera.
1941. A fossil horse from Koffiefontein, O.F.S. *Trans. roy. Soc. S. Afr.*, Cape Town, 28: 301-306, 1 pl., 1 text-fig.
Equus fowleri sp. nov.
 Late Pleistocene?: Koffiefontein, Orange Free State.
1943. A further report on the Wonderwerk Cave, Kuruman. Section II—Fauna. *S. Afr. J. Sci.*, Johannesburg, 40: 263-270.
 Revision, with more material, of the fauna descr. in COOKE, 1941a, q.v.
 [Anthropologie, 52: 125.]
1947. The possible field of anatomical research in South Africa. *S. Afr. J. Sci.*, Johannesburg, 43: 79-89.
 General discussion, including fossil faunas.

WELLS, L. H. (*contd.*)

See also COOKE & WELLS. See also KITCHING, WELLS & WESTPHAL.

WELLS, L. H., & COOKE, H. B. S., 1942. The associated fauna and culture of Vlak-
kraal thermal springs, O.F.S. III. The faunal remains. *Trans. roy. Soc. S. Afr.*,
Cape Town, **29**: 214–232, 8 figs.

Hystricomorph rodent indet., cf. *Crocota crocuta* (Erxleben), cf. *Cynalopex chama* (A. Smith), cf. *Lycaon pictus* (Burchell), *Peloroceras helmei* (Lyle), *Connochaetes* cf. *taurinus* (Burchell), *Damaliscus* cf. *albifrons* (Burchell), *Damaliscus* cf. *pygargus* (Pallas), *Antidorcas marsupialis* (Zimmermann), cf. *Sylvicapra grimmia* (Linnaeus), cf. *Taurotragus oryx* (Pallas), antelope gen. et sp. indet., *Hippopotamus* cf. *amphibius* Linn., *Phacochoerus aethiopicus* (Pallas), *Phacochoerus compactus* (van Hoepen & van Hoepen), *Phacochoerus helmei* Dreyer & Lyle, *Equus burchelli* (Gray), *Equus* cf. *kuhni* Broom, *Equus capensis* Broom.

Middle Stone Age = late Upper Pleistocene.

[*Anthropologie*, **52**: 492–494.]

WERTH, E., 1919 (1918). *Parapithecus*, ein primitiver Menschenaffe. *S.B. Ges. naturf. Fr. Berlin*, **1918**: 327–345, 7 figs.

P. fraasi very primitive; closely connected with the Anaptomorphidae; representative of the stock that gave rise to the Hylobatidae.

WESTPHAL, E. See KITCHING, WELLS & WESTPHAL.

WHITE, F., 1909 (1908). Notes on a cave containing fossilised bones of animals, worked pieces of bone, stone implements and quartzite pebbles, found in a kopje or small hill, composed of zinc and lead ores, at Broken Hill, North-Western Rhodesia. *Proc. Rhod. sci. Ass.*, Bulawayo, **7**, 2: 13–25, 2 figs.

General description of the locality: preliminary list of mammals by E. C. CHUBB.

[See also CHUBB, 1909 (1908).]

WOODWARD, A. S., 1904. The ancestry of the elephants. *Knowledge*, London, **1**: 11–13, 7 figs.

Popular account, with additional illustrations, of ANDREWS, 1903a.

1925. The fossil anthropoid ape from Taungs. *Nature*, London, **115**: 235–236.

[One of a series of notes by various authors under the same general title.

See also DUCKWORTH, 1925; KEITH, 1925a; G. E. SMITH, 1925.]

See also KEITH, SMITH, WOODWARD & DUCKWORTH.

ZDANSKY, O., 1938. *Eotherium majus* sp. n. eine neue Sirene aus dem Mitteleozän von Ägypten. *Palaeobiol.*, Wien, **6**: 429–434, 1 fig.

Upper Lutetian: Gebel Mokattam, E. of Kait Bey.

ZEALLEY, A. E. V., 1916. A breccia of mammalian bones at Bulawayo Waterworks Reserve. *Proc. Rhod. sci. Ass.*, Bulawayo, **15**: 5–16, 2 pls., 3 text-figs.

Hippopotamus sp., probably *amphibius*; *Phacochoerus aethiopicus*; *P.* sp., probably *aethiopicus*; *Damaliscus lunatus*; *D.* sp., probably *lunatus*; *Cephalopus grimmii*; ?*Oreotragus oreotragus*; ?*Cobus ellipsiprymnus*; ?*C. vardonii*; *Cervicapra arundinum*; ?*Aepyceros melampus*; *Hippotragus equinus*; *H. niger*; *Tragelaphus angasi*, possibly *T. selousi*; *Bos* sp., possibly *caffer*; *Equus* sp., possibly *zebra* or *burchelli*; *Procavia capensis*; *Xerus capensis*; ?*Mus coucha*; ?*Cricetomys gambianus*; ?*Georychus* sp., *Pedetes caffer*; *Lepus zuluensis* Chubb; *Felis pardus*; *Cynaelurus jubatus*; *Herpestes* sp., probably *galera*; ?*Cynictis selousi*; *Hyaena crocuta*; *H.* sp., probably *crocuta*; *Canis adustus*.

“Probably of ‘Recent’ as opposed to ‘Pleistocene’ age.”

ZITTEL, K. A. [VON], 1883. Beitrage zur Geologie und Palaeontologie der Libyschen Wüste und der angrenzenden Gebiete von Aegypten. I. Geologischer Theil. *Palaeontographica*, Cassel, 30: 1-147, pl., folding map, 10 text-figs. [unnumbered].

Zeuglodon, Upper Eocene or Oligocene, N.W. shore of Birket-el-Qurûn (pp. 126-127). *Hippopotamus* in river gravels between Derr, Nubia, and the First Cataract.

[The author's name is given as Karl A. Zittel; he was not ennobled until some years later.]

ZUCKERMAN, S., 1928. Age changes in the Chimpanzee with special reference to growth of brain, eruption of teeth and estimation of age, with a note on the Taungs ape. *Proc. zool. Soc. London*, 1928: 1-42, 4 pls., 3 text-figs.

1950a. South African fossil anthropoids. *Nature, London*, 165: 652.

Teeth of *Plesianthropus*, *Australopithecus prometheus*, *Paranthropus robustus* briefly compared with orang and gorilla.

1950b. South African Fossil Hominoids. *Nature, London*, 166: 158-159.

Reply to CLARK, W. E. LE G., 1950a, q.v.

See also ASHTON & ZUCKERMAN.

GEOGRAPHICAL INDEX

This Index is intended for use in faunistic and stratigraphical studies. Anatomical and zoological papers have been omitted unless they are also of faunistic or stratigraphical interest.

Starting in the North-West, the countries and provinces follow on clockwise in geographical order, but the localities under those headings are arranged alphabetically. Localities mentioned only once have not been listed separately; the papers in which they occur are included among the general papers placed immediately after the name of the country or province.

The orthography of geographical names is often disputed; we have taken the 'Atlas des Colonies Françaises' as our authority for French Africa, and the 'Times Atlas' for the remainder. The gazetteer to the latter is often inconsistent and not entirely satisfactory, and we have, therefore, sometimes put alternative spellings (in brackets) after that given in the Atlas.

BARBARY

(An obsolete term revived by Joleaud for use in studies covering more than one of the North African territories. Its approximate extent is from Lat. 25° N. to Lat. 37° N., and from Long. 10° W. to Long. 25° E.)

Joleaud 1910, 1912*b*, 1914*b*, 1918*a*, 1918*b*, 1918*c*, 1918*d*, 1920*c*, 1924, 1926*a*, 1926*b*, 1927*b*, 1927*c*, 1929, 1931, 1932*a*, 1933 (1930), 1933 (1931), 1933*d*, 1933*e*, 1933*g*, 1934 (1931*b*), 1936–1937 (1935), 1936*b*.

MOROCCO

Arambourg 1932*a*, 1933*c*, 1938*a*, 1949*a*; Bourcart 1933*a*, 1933*b*; Cabrera 1932; Dalloni 1940; Dresch 1935; Ennouchi 1948*b*, 1949*b*, 1950*b*; Joleaud 1933 (1931), 1934*c*; Neuville & Ruhlmann 1941; Pallary 1923.

AÏN-TIT-MELIL, *see* CASABLANCA.

CAMP BERTEAUX (200 km. N.W. of TAOURIRT). Bourcart 1937; Choubert 1946 (1945); Choubert & Ennouchi 1946.

CASABLANCA. Arambourg 1938*b*; Bourcart 1927; Ennouchi 1949*b*; Gobert & Vaufrey 1932.

FÈS (FEZ). Depéret, Passemard & Rochette 1928; Ennouchi 1949*b*.

MAZAGAN. Ennouchi 1949*b*, 1949*c*, 1949*d*, 1949*e*; Ruhlmann 1936.

OUN ER RBIA. Ennouchi 1949*a*, 1949*b*; Choubert & Ennouchi 1946.

PORT LYAUTEY. Choubert & Ennouchi 1946; Ennouchi 1949*a*, 1949*b*, 1950*b*.

RABAT. Arambourg 1948*b*; Bourcart 1927; Ennouchi 1948*a*, 1949*b*, 1950*a*; Lecoindre 1926; Marçais & Choubert 1947.

TANGIER. Ennouchi 1949*b*; Howe & Movius 1947; Ramsay & Geikie 1878.

TAOURIRT. Ennouchi 1949*a*, 1949*b*, 1950*b*.

TAZA. Campardou 1917; Ennouchi 1949*b*; Joleaud 1918*c*; Lavauden 1926.

ALGERIA

Arambourg 1929*b*, 1933*c*; Boule 1899*b*, 1900 (1899); Bourguignat 1868*a*, 1869; Choubert 1946 (1945); Dalloni 1940; Débruge 1925; Joleaud 1912*a*, 1913 (1912), 1914*a*, 1916 (1915), 1917, 1918 (1917), 1920*a*, 1920*b*, 1923*b*, 1927*a*, 1933 (1931); de Lamothe 1904; Niçaise 1870*b*; Pomel 1890*a*, 1890*b*, 1893*a*, 1893*b*, 1893*c*, 1894*a*, 1894*b*, 1894*c*, 1895, 1896 (1895), 1896*a*, 1896*b*, 1896*c*, 1896*d*, 1896*e*, 1897 (1896)*a*, 1897 (1896)*b*, 1897*a*, 1897*b*, 1897*c*, 1897*d*, 1898 (1897); Renou 1846; Romer 1928; Thomas 1881, 1882 (1881), 1884*a*; Vaufrey 1929.

ORAN

Anderson 1932; Arambourg 1931*b*; Doumergue 1919, 1923, 1925, 1934; Pallary 1892.

ABOUKIR, *see* MOSTAGANEM.

AÏN-MEFTA, *see* NEDROMA (AÏN-MEFTA).

BENI SAF. Ehrmann 1920*b*; Lavauden 1926; Pomel 1890*b*.

BOU-SFER, *see* ORAN (BOU-SFER).

KAROUBA, *see* MOSTAGANEM.

LAC KARAR, *see* TLEMCEN.

MARNIA. Barbin 1910, 1912; Pallary 1910 (1907).

MASCARA (*see also* PALIKAO). Dalloni 1940; Joleaud 1937; Pallary 1887*b*; Pomel 1886 (1885)*a*, 1886 (1885)*b*, 1886 (1885)*c*, 1890*b*; Suess 1932.

MOSTAGANEM (incl. ABOUKIR, KAROUBA). Arambourg 1948*b*; Doumergue 1922; Pallary 1887*a*; Thomas 1884*a*.

NEDROMA (AÏN-MEFTA). Pomel 1892*a*, 1892*c*.

ORAN. Bleicher 1875; Carrière 1886; Doumergue 1893 (1892), 1907, 1910, 1913, 1921*b*, 1925, 1926*b*, 1927, 1935; Lavauden 1926; Milne Edwards 1837; Pallary 1934; Pallary & Tommasini 1892 (1891); Pomel 1878*a*, 1892*b*; Tournouër 1878*c*; Vaufrey 1940.

ORAN (BOU-SFER). Doumergue 1921*a*; Vuillemot 1937.

PALIKAO (incl. TERNIFINE. *See also* MASCARA). Arambourg 1948*b*; Carrière 1886; Dalloni 1940; Pallary 1887*b*, 1900; Pomel 1879, 1886 (1885)*a*, 1886 (1885)*b*, 1886 (1885)*c*, 1888*a*, 1888*b*; Thomas 1884*a*, 1884*d*; Tommasini 1886.

SAÏDA. Doumergue 1926*a*; Doumergue & Poirier 1894.

TERNIFINE, *see* PALIKAO. (The gravel pit of Ternifine is near the small town Palikao.)

TLEMCEN (incl. LAC KARAR). Arambourg 1948*b*; Boule 1900; Doumergue 1925; Estaunié 1941.

ALGIERS

Arambourg 1927; Depéret 1897; Marchand 1932; Niçaise 1870*a*.

ALGIERS. Doumergue 1921*b*; Flamand 1902 (1901); Niçaise 1870*a*; Pomel 1892*d*.

ALGIERS (BAINS ROMAINS). Arambourg 1931*c*; Dalloni 1940; Ficheur & Brives 1900.

ALGIERS (BIRMANDREIS). Balout 1942; Bory de Saint-Vincent 1841*a*, 1841*b*; Lartet 1868.

ALGIERS (MAISON CARRÉE). Arambourg & Ducellier 1925; Niçaise 1870*a*.

ALGIERS (POINTE-PESCADE). Anonymous 1876; Bourjot 1868, 1869*a*, 1869*c*; Dalloni 1940; Lartet 1868; Lavauden 1926; Pomel 1894*d*.

BAINS ROMAINS, *see* ALGIERS (BAINS ROMAINS).

BIRMANDREIS, *see* ALGIERS (BIRMANDREIS).

CAP TENÈS. Marchand 1934*b*, 1935.

CHERCHÉL. Gervais 1848–1852, 1849*b*, 1851 (1850); Niçaise 1870*a*.

GRAND ROCHER, *see* GUYOTVILLE.

GUYOTVILLE (incl. GRAND ROCHER). Anonymous 1876; Arambourg 1932*b*, 1935*a*; Bourjot 1869*b*; Pomel 1892*d*.

MAISON CARRÉE, *see* ALGIERS (MAISON CARRÉE).

MILIANA. Niçaise 1870*a*; Thomas 1884*a*.

POINTE-PESCADE, *see* ALGIERS (POINTE-PESCADE).

CONSTANTINE

Arambourg 1931*b*; Dalloni 1940; Débruge 1921; Gaudry 1891*b*; Guyon 1841; Joleaud 1927*c*, 1927*e*; Levailant 1844; Royer 1927; Savornin 1920; Thomas 1879*a*, 1884*d*.

AÏN-EL-BEY. Dalloni 1940; Thomas 1884*a*, 1884*c*.

AÏN-M'LILA. Débruge 1923; Lavauden 1926; Robert 1900, 1906; Thomas 1877.

BISKRA. Thomas 1879*b*, 1884*d*.

BÔNE. Arambourg 1944*b*; Depéret 1921; Gaudry 1876*a*; Joleaud 1933*c*; Joleaud & Roubault 1936; Papier 1876, 1878.

BOUGIE. Arambourg 1929*a*, 1931*a*, 1933 (1931); Arambourg, Boule, Vallois & Verneau 1934; Débruge 1903 (1902), 1903, 1906 (1905), 1906*a*, 1906*b*, 1907 (1906); Erhmann 1920*a*; Gervais 1849*d*, 1849*e*, 1850 (1849); Pomel 1892*d*.

CHÂTEAUDUN DU RHUMEL (incl. MECHTA CHÂTEAUDUN, MECHTA-EL-ARBI, OUED RHUMEL). Débruge & Mercier 1913 (1912), 1914; Doumergue 1913; Mercier & Débruge 1913; Ollivier 1859*a*, 1859*b*; Romer 1928; Solignac 1925 (1923–1924).

CONSTANTINE. Bayle 1854; Débruge 1909 (1908); 1910 (1909), 1913 (1912); Joleaud 1912*c*, 1918 (1916), 1918*d*, 1927*a*; Lavauden 1926; Pomel 1878*b*; Rüttimeyer 1877, 1878; Thomas 1884*a*, 1884*c*; Tournouër 1878*a*, 1878*b*, 1879*a*, 1879*b*.

DJEBEL THAYA. Barone 1944; Bourguignat 1867, 1868*b*, 1870.

DUVIVIER. Gaudry 1876*b*; Joleaud 1923*a*, 1933; Papier 1876, 1878; Pomel 1890*b*.

GUELMA. Dalloni 1940; Gervais 1848–1852, 1850*a*, 1851 (1850); Lydekker 1890; Thomas 1886.

HAMMAM MESKOUTINE. Dalloni 1940; Lydekker 1890.

MANSOURA, Dalloni 1940; Gervais 1867–1869; Joleaud 1918*c*.

MECHTA CHÂTEAUDUN, *see* CHÂTEAUDUN DU RHUMEL.

MECHTA-EL-ARBI, *see* CHÂTEAUDUN DU RHUMEL.

OUED RHUMEL, *see* CHÂTEAUDUN DU RHUMEL.

OUED SEGUEN, *see* SEGUEN.

OUED SMENDOU, *see* SMENDOU.

SAINT-ARNAUD. Arambourg 1948 (1947), 1948*a*, 1949*a*, 1949*b*; Dalloni 1940; Joleaud 1923*a*; Thomas 1884*a*.

SEGUEN (incl. OUED SEGUEN). Gaudry 1887; Thomas 1884*a*, 1884*d*, 1886.

SÉTIF. Arambourg 1948*b*; Duvernoy 1851; Gervais 1867–1869; Rüttimeyer 1877, 1878; Savornin 1920; Thomas 1884*a*.

SMENDOU (incl. OUED SMENDOU). Gervais 1848–1852, 1849*b*, 1851 (1850); Joleaud 1937; Thomas 1884*a*.

TEBESSA. Brives 1919, 1920; Débruge 1911; Joleaud 1937; Marchand 1934*a*.

TERRITOIRE DE GHARDAÏA

Maw 1876; Thomas 1875*a*, 1875*b*, 1876, 1884*a*.

TERRITOIRE DU SUD

TIHODAÏNE. Devillers 1948; Joleaud 1936c.

TERRITOIRE DE TOUGGOURT

Cauvet 1937.

CHETMA. Gaudry 1879; Thomas 1879b, 1884a, 1884d.

TUNISIA

Arambourg 1932a; Boule 1910a, 1910b, 1910c; Choubert 1946 (1945); De Morgan, Capitain & Boudy 1910; Gobert 1912; Joleaud 1933 (1931); de Lamothe 1904; Roman 1931; Roman & Solignac 1934; Solignac 1927; Vaufrey 1929.

BIZERTA. Dalloni 1940; Joleaud 1937; Solignac 1924, 1927.

CHERICHERA. Gaudry 1891a, 1891b.

FERRYVILLE. Depéret, Lavauden & Solignac 1925; Solignac 1927.

GARET ACHKEUL. Arambourg 1949a; Arambourg & Arnould 1950 (1949).

CYRENAICA

BENGHAZI. Petrocchi 1941a, 1941b, 1943.

EGYPT

Blanckenhorn 1903 (1902); Huzayyin 1941; Joleaud 1920b, 1935a, 1937; Sickenberg 1934; Stromer 1908a, 1908b.

ASYÛT (ASSIOUT, ASSIÛT). Joleaud 1933h; Sandford 1929.

CAIRO (incl. MOKATTAM). Arambourg 1945, 1947b; Beadnell 1901a, 1901b; Filhol 1878; Fourtau 1900 (1899); Fraas 1904a, 1904b, 1904c; Owen 1875; Priem 1907, 1908 (1907); Zdansky 1938.

FAYYÛM (FAJUM, FAYOUM, FAYÛM). Andrews 1901a, 1901b, 1901c, 1902a, 1902c, 1902d, 1903a, 1903b, 1903c, 1904a, 1904b, 1904c, 1905, 1906, 1907b, 1907c, 1908a, 1908b, 1923b; Andrews & Beadnell 1902; Beadnell 1901c, 1902, 1905; Blanckenhorn 1900, 1901b, 1921; Dames 1883, 1894; Depéret 1907, 1908 (1907); Haug 1911; Matsumoto 1921, 1922, 1923, 1924, 1926; Matthew 1910; Osborn 1908, 1909, 1910; Petronievics 1923; Pompecki 1922; Pontier 1907, 1910 (1909); Schlosser 1910, 1911; Schmidt 1913; Schweinfurth 1886; Stromer 1903c, 1903d, 1907c, 1921; Zittel 1883.

KALÂBSHA. Falconer 1864, 1865.

KÔM OMBÔ. Gaillard 1934; Joleaud 1933h.

MOGHARA. Andrews 1899, 1900; Blanckenhorn 1901a, 1921; Fourtau 1920; von Koenigswald 1948a.

MOKATTAM (DJEBEL, GEBEL, JEBEL or HILLS), *see* CAIRO.

WÂDY FAREGH. Blanckenhorn 1921; Stromer 1907a, 1907b; Studer 1899 (1898).

WÂDY NATRUN. Andrews 1902b; Arambourg 1944b, 1947a; Blanckenhorn 1901b, 1921; Depéret 1921; Joleaud 1923a; Schlosser 1903; Stromer 1902, 1907a, 1907b, 1913, 1914, 1920; Studer 1899 (1898); Tobien 1936.

SUDAN

Bouet & Neuville 1930; Grabham 1920; Hopwood 1929a; Morton 1849.

KHARTUM. Andrews 1912b; Arambourg 1943a; Bate 1947; Grabham 1920; Joleaud 1933h.

WÂDY HALFA. Joleaud 1933h; Lydekker 1887.

ABYSSINIA

OMO. Arambourg 1934*a*, 1934*b*, 1935 (1934), 1941, 1943*a*, 1943*d*, 1944, 1947*a*, 1948*b*; Arambourg & Jeannel 1933; Cooke 1949*a*; Haug 1911; Hopwood 1929*c*; Joleaud 1928*a*, 1933*a*, 1933*b*; Leakey 1943*b*.

KENYA COLONY

Cooke 1949*a*; Hopwood 1936*a*; Leakey 1946; Vaufrey 1947.

GAMBLE'S CAVE, *see* LAKE NAIVASHA.

HOMA MOUNTAIN, *see* KANJERA.

KANAM. Anonymous 1933; Arambourg 1948*b*; Hopwood 1935, 1936*a*; Kent 1942*b*; MacInnes 1942.

KANJERA (incl. HOMA MOUNTAIN). Andrews 1916; Anonymous 1933; Arambourg 1943*a*, 1948*b*; Hopwood 1926*a*, 1929*c*, 1935, 1936*a*; Kent 1942*b*; Leakey 1943*a*; MacInnes 1942.

KARUNGU. Andrews 1911*a*, 1911*b*, 1914; Haug 1911; Hopwood 1929*c*; Kent 1944; MacInnes 1942.

KIBOKO ISLAND. Arambourg 1946 (1945); MacInnes 1936, 1942.

KORU. Arambourg 1943*b*; Hopwood 1933*a*, 1933*b*; Kent 1941*a*, 1944.

LAKE NAIVASHA (incl. GAMBLE'S CAVE). Hopwood 1931*c*; Lönnberg 1933, 1937; Nilsson 1932, 1945.

LAKE RUDOLPH, *see* TURKANA.

LOSODOK, *see* TURKANA.

RAWI. Arambourg 1948*b*; Hopwood 1936*a*; Kent 1942*b*.

RUSINGA ISLAND. Anonymous 1948*b*; Hopwood 1948; Kent 1944; Leakey 1943*c*, 1948*a*; MacInnes 1942, 1943; Vaufrey 1948*a*; Wayland 1931 (1930); Wayland & Groves 1931.

SONGHOR. Kent 1944; MacInnes 1943.

TURKANA (incl. LAKE RUDOLPH and LOSODOK). Arambourg 1933*a*, 1933*b*, 1943*d*, 1947*a*; Dixey 1944.

TANGANYIKA TERRITORY

Cooke 1949*a*; Hopwood 1931*a*; Kent 1942*a*; Reck 1922 (1921); Reck & Dietrich 1923; Reck & Pohle 1922.

LAETOLIL (incl. SERENGETI and VOGEL RIVER). Arambourg 1943*a*, 1948*b*; Dietrich 1939, 1941, 1942*a*; Hopwood 1936*a*; Kent 1941*b*.

LAKE EYASI. Dietrich 1939, 1941, 1942*a*; Leakey 1936; Reck & Kohl-Larsen 1936; Vaufrey 1948.

OLDOWAY, *see* OLDUVAI.

OLDUVAI. Arambourg 1943*a*, 1948*b*; Branca 1914; Dietrich 1916, 1925, 1926, 1928, 1933, 1937*a*, 1937*b*; Hilzheimer 1925; Hopwood 1934, 1936*a*, 1936*b*, 1937; Janensch 1925; Joleaud 1932 (1931); Leakey 1942; Pohle 1928; Reck 1914*a*, 1914*b*, 1925, 1926, 1928, 1932*a*, 1932*b*, 1933, 1935, 1937; Remane 1925; Schwarz 1932, 1937; Wayland 1932.

SERENGETI, *see* LAETOLIL.

TENDAGURU. Branca 1916; Dietrich 1927; Simpson 1928.

VOGEL RIVER, *see* LAETOLIL.

UGANDA

Hopwood 1939*a*; O'Brien 1939.

KAISO. Andrews 1923*a*, 1923*c*, 1924*b*; Arambourg 1948*b*; Hopwood 1926*b*, 1929*c*, 1939*a*; MacInnes 1942.

NYASALAND

Hopwood 1927, 1929*c*, 1931*a*.

NORTHERN RHODESIA

Clark 1942; Zealley 1916.

BROKEN HILL. Chubb 1909 (1908); Cooke & Clark 1939; Hopwood 1928*a*, 1929*c*; Mennell & Chubb 1907; White 1909 (1908).

UNION OF SOUTH AFRICA

Arambourg 1943*a*; Cooke 1949*a*, 1950; Dart 1936; Haughton 1932*a*.

TRANSVAAL

Broom 1936*a*, 1937*b*; Broom & Robinson 1949*d*; Dart 1929*a*; Haughton 1932*b*; Prag 1935; Shaw 1937; Wells 1939.

KROMDRAAI. Arambourg 1948*b*; Broom 1938*b*, 1939*d*, 1940*a*, 1945*a*, 1945*b*, 1948*a*; van Riet Lowe 1945.

MAKAPAN (incl. MAKAPANSGAAT, MAKAPANSGAT, MAKAPAN VALLEY). Anonymous 1948; Broom 1937*d*, 1948*b*; Broom & Hughes 1949; Broom & Jensen 1946; Cooke & Wells 1947; Dale 1948; Dale & Tobiansky 1947; Dart 1948*a*, 1948*d*; George 1950; Kitching, Wells & Westphal 1948; van Riet Lowe 1938; Mollett 1947.

MAKAPANSGAAT, *see* MAKAPAN.

MAKAPANSGAT, *see* MAKAPAN.

MAKAPAN VALLEY, *see* MAKAPAN.

SCHURVE BERG (*as* SCHURVEBERG). Broom 1937*b*, 1948*a*.

STERKFORTEIN. Arambourg 1948*b*; Broom 1936*b*, 1936*c*, 1937*b*, 1937*d*, 1939*d*, 1940*a*, 1941*a*, 1945*a*, 1945*b*, 1947*b*, 1947*c*, 1948*a*; Broom & Le Riche 1937; Cooke 1947*b*; Jones 1937 (1936); van Riet Lowe 1945; Shaw 1938, 1939*a*, 1940.

VAAL RIVER. Cooke 1947 (1946), 1949*b*; Dart 1927, 1929*a*.

NATAL

Scott 1907.

ORANGE FREE STATE

Broom 1913*a*; Dart 1929*a*; Dreyer & Lyle 1931; Shapiro 1943; van Hoepen 1930*a*, 1947; Wells & Cooke 1942.

CORNELIA. van Hoepen 1930*b*, 1932*a*, 1932*b*; van Hoepen & van Hoepen 1932.

KOFFY FONTEIN (KOFFIEFONTEIN). Cooke 1948; Wells 1941.

MODDER RIVER. Bain 1839, 1845; Broom 1909*a*; Seeley 1891.

CAPE PROVINCE.

Bain 1856; Broom 1909*b*, 1913*b*, Dart 1929*a*.

DARLING. Broom 1913*b*; Cooke 1947*b*; Peringuey 1907.

KURUMAN. Cooke 1941*a*; Wells 1943.

TAUNGS. Arambourg 1948*b*; Broom 1930, 1934, 1939*b*, 1940*a*, 1945*a*, 1945*b*, 1948*a*, 1948*b*; Dart 1925*a*; Gear 1926; van Riet Lowe 1945.

VAAL RIVER. Arambourg 1948*b*; Beck 1906; Broom 1925*c*, 1928*a*, 1931; Cooke 1939, 1947 (1946), 1949*b*; Cooke & Wells 1946; Dreyer & Lyle 1931; Fraas 1907*a*, 1907*b*; Haughton 1922 (1921), 1932*a*; Joleaud 1937; Osborn 1928, 1934*a*; Shaw & Cooke 1941.

SOUTH-WEST AFRICA

Haughton 1932*a*, 1932*b*; Hopwood 1929*b*, 1929*c*; von Huene 1925; Pia 1930; Sickenberg 1934; Stromer 1922 (1921), 1923, 1924 (1923), 1926, 1932 (1931)*a*, 1932 (1931)*b*.

ANGOLA

Mouta 1950.

BELGIAN CONGO

Darteville 1935; Van Straelen 1924.

FRENCH EQUATORIAL AFRICA

Joleaud & Lombard 1933, 1934 (1933), 1935.

NIGERIA

Andrews 1920 (1919).

FRENCH WEST AFRICA

De Beaumais & Royer 1926; Joleaud 1934*a*, 1935*b*, 1936 (1933), 1936*b*, 1936*c*, 1936–1937 (1935); Joleaud & Malavoy 1931; Lavauden 1926; Pomel 1871; Roman 1934, 1935 (1934), 1935; Romer & Nesbit 1930; Tilho & Arambourg 1938.

SOUNFAT. Joleaud 1936*c*; Joleaud & Menchikoff 1934.

TAOUDENNI. Chudeau 1909; Joleaud 1934*b*, 1934*c*.

SYSTEMATIC INDEX

The classification adopted is that of Simpson, 1945, with minor alterations. Extinct genera and species are marked by an obelus, it being understood that if a genus or species is extinct the lower taxonomic grades therein contained are also extinct and need not be marked.

Species are arranged alphabetically under their genera, and subspecies similarly under species, except that when the type-species of a genus is known in the fossil state, that species is placed first and marked with an asterisk.

With few exceptions, generic synonymies are taken from Simpson; synonymies of species, on the other hand, are designed to raise problems rather than to solve them. In our study of the literature we have been unfavourably impressed by the slender evidence on which reputedly new species have been based. We have often taken these species to be synonymous with older and better founded ones in the hope that later revisers will be able to decide the matter. For this and other reasons our specific synonymies should be regarded as suggestions, rather than as authoritative statements made *ex cathedra*.

Order PANTOTHERIA

Family PAURODONTIDAE

†*Brancatherulum* Dietrich, 1927

**tendaguruense* Dietrich

Dietrich, 1927; Simpson, 1928

U. Jurassic.
Tanganyika.

? Order MARSUPIALIA

? Family CAENOLESTIDAE

†*Palaeothentoides* Stromer, 1932

**africanus* Stromer

Stromer, 1932 (1931)b

?M. Pliocene.
S.W. Africa.

Order INSECTIVORA

Family CHRYSOCHLORIDAE

†*Proamblysomus* Broom, 1941

**antiquus* Broom

Broom, 1941a, 1948a

Pleistocene.
South Africa.

Chlorotalpa Roberts, 1924

†*spelaea* Broom

Broom, 1941a, 1948a

Pleistocene.
South Africa.

Family *ERINACEIDAE***Aethechinus** Thomas, 1918

- ***algius** (Duvernoy & Lereboullet) = *algericus* Auctorum Pleistocene.
 Arambourg, 1938a; Cabrera, 1928a; Campardou, 1917; Howe Barbary.
 & Movius, 1947

Erinaceus Linnaeus, 1758

- ***europaeus** Linnaeus Pleistocene.
 Marchand, 1935 Egypt.

†**Metolbodotes** Schlosser

- ***stromeri** Schlosser L. Oligocene.
 Schlosser, 1910, 1911 Egypt.

Atelerix Pomel, 1840

- †**major** Broom Pleistocene.
 Broom, 1937d, 1948a South Africa.

Family *MACROSCELIDIDAE***Elephantulus** Thomas & Schwann, 1906(Including *Elephantomys* Broom, 1937)

- †**antiquus** Broom Pleistocene.
 Broom, 1948a South Africa.

- †**langi** (Broom) Pleistocene.
 Broom, 1937b, 1948a South Africa.

- rozeti** (Duvernoy) Pleistocene.
 Romer, 1928 Algeria.

†**Mylomygale** Broom, 1948

- ***spiersi** Broom Pleistocene.
 Broom, 1948a South Africa.

Family *SORICIDAE***Sorex** Linnaeus, 1758

- ***araneus** Linnaeus = *vulgaris* Nilsson Pleistocene.
 Romer, 1928 Algeria.

Crocidura Wagler, 1832

- †**taungensis** Broom Pleistocene.
 Broom, 1948a South Africa.

Order CHIROPTERA

Family *PHYLLOSTOMATIDAE*†**Vampyravus** Schlosser, 1910(= *Provampyrus* Schlosser, 1911)

- ***orientalis** Schlosser L. Oligocene.
 Schlosser, 1910, 1911 Egypt.

Insectivore of uncertain position

†**Ptolemaia** Osborn, 1908

- ***lyonsi** Osborn L. Oligocene.
 Osborn, 1908; Schlosser, 1910, 1911 Egypt.

Order PRIMATES

Family LORISIDAE

†**Progalago** MacInnes, 1943

***dorae** MacInnes
MacInnes, 1943

L. Miocene.
Kenya.

Family CERCOPITHECIDAE

Macaca Lacépède, 1799

(= *Aulaxinuus* Cocchi, also *Macacus*, *Pithecus*, *Simia*
Auctorum)

***inuus** (Linnaeus)
Arambourg, Boule, etc., 1934; Bourguignat, 1870; de
Lamothe, 1907

U. Pleistocene.
Algeria.

gesilla Blainville
Flamand, 1902 (1901)

U. Pleistocene.
Algeria.

†**libycus** (Stromer)
Stromer, 1920

L. Pleistocene.
Egypt.

†**proinuus** Pomel
Pomel, 1897 (1896)a; Romer, 1928

Pleistocene.
Algeria.

†**trarensis** Pomel
Pomel, 1892c; Romer, 1928

Pleistocene.
Algeria.

†**Cercopithecoides** Mollett, 1947
(= *Macaca* s. g.)

***williamsi** Mollett
Mollett, 1947; Broom & Hughes, 1949

L. Pleistocene.
South Africa.

†**Libypithecus** Stromer, 1913

***markgrafi** Stromer
Abel, 1914; Edinger, 1938; Stromer, 1913, 1920; Weber,
1927-1928

Pliocene?
Egypt.

†**Simopithecus** Andrews, 1916

(Including *Gorgopithecus* Broom & Robinson, 1949)

***oswaldi** Andrews
Andrews, 1916; Hopwood, 1936a; Kent, 1942b; Leakey,
1943a; Reck & Kohl-Larsen, 1936

M. Pleistocene.
Kenya.

leakeyi Hopwood
Hopwood, 1934, 1936a; Vaufrey, 1947

M. Pleistocene.
Kenya,
Tanganyika.

major (Broom)
Broom, 1940a; Broom & Robinson, 1949f

Pleistocene.
South Africa.

Cercocebus Geoffroy, 1812

†**ado** Hopwood
Hopwood, 1936a; Kent, 1941b

L.-M. Pleisto-
cene.
Tanganyika.

†**Parapapio** Jones, 1937

- *broomi** Jones
Broom, 1940a; Dart, 1949g; Jones, 1936 (1937); Kitching, Wells & Westphal, 1948; Mollett, 1947
Pleistocene.
South Africa.
- africanus** (Gear)
Broom, 1930, 1934, 1940a; Dart, 1949g; Gear, 1926; Jones, 1937 (1936)
Pleistocene.
South Africa.
- angusticeps** Broom
Broom, 1940a
Pleistocene.
South Africa.
- antiquus** (Haughton)
Broom, 1948a; Haughton, 1925
L. Pleistocene.
South Africa.
- coronatus** Broom & Robinson
Broom & Robinson, 1950f
Pleistocene.
South Africa.
- izodi** (Gear)
Broom, 1940a; Dart, 1949g; Gear, 1926; Jones, 1937 (1936)
Pleistocene.
South Africa.
- jonesi** Broom
Broom, 1940a; Kitching, Wells & Westphal, 1948
Pleistocene.
South Africa.
- makapani** Broom & Hughes
Broom & Hughes, 1949
Pleistocene.
South Africa.
- whitei** Broom
Broom, 1940a; Broom & Robinson, 1950f
Pleistocene.
South Africa.

†**Dinopithecus** Broom, 1937

- *ingens** Broom
Broom, 1937b, 1940a; Mouta, 1950
Pleistocene.
South Africa,
Angola?
- brumpti** Arambourg
Arambourg, 1947a
L. Pleistocene.
Abyssinia.

Choeropithecus Blainville, 1839

(= *Papio* Erxleben, 1777, *non* Müller, 1776, = *Cynocephalus*
Cuvier & Geoffroy, 1795, *non* Boddaert, 1768)

- †**atlanticus** (Ph. Thomas)
Joleaud, 1910; Romer, 1928; Thomas, 1884a
L. Pleistocene.
Algeria.
- comatus** (Geoffroy) = *porcarius* (Boddaert)
Broom, 1941c; Jones, 1937 (1936); Ph. Thomas, 1884c
Pleistocene.
Algeria,
South Africa.
- †**darti** (Broom & Jensen)
Broom & Hughes, 1949; Broom & Jensen, 1946; Kitching, Wells & Westphal, 1948
Pleistocene.
South Africa.
- neumanni** (Matschie)
Dietrich, 1939; Hopwood, 1931c
Pleistocene.
Tanganyika.
- †**serengetensis** (Dietrich)
Dietrich, 1942a
L. Pleistocene.
Tanganyika.
- †**spelaeus** (Broom)
Broom, 1936a, 1940a
Pleistocene.
South Africa.

†**Moeripithecus** Schlosser, 1911

- *markgrafi** Schlosser
Schlosser, 1910, 1911
L. Oligocene.
Egypt.

†*Apidium* Osborn, 1908**phiomensis* OsbornArambourg, 1943*c*; Osborn, 1908; Schlosser, 1911; Weber, 1927-1928L. Oligocene.
Egypt.Family *PARAPITHECIDAE*†*Parapithecus* Schlosser, 1911**fraasi* SchlosserAbel, 1914; Arambourg, 1943*c*; Schlosser, 1910, 1911; Weber, 1927-1928; Werth, 1919 (1918)L. Oligocene.
Egypt.Family *PONGIDAE*†*Propliopithecus* Schlosser, 1911**haeckeli* SchlosserAbel, 1914; Arambourg, 1943*c*; Boule, 1946; Schlosser, 1910, 1911; Weber, 1927-1928L. Oligocene.
Egypt.†*Limnopithecus* Hopwood, 1933**legetet* HopwoodArambourg, 1943*c*; Hopwood, 1933*a*, 1933*b*; MacInnes, 1943L. Miocene.
Kenya.*evansi* MacInnes

MacInnes, 1943

L. Miocene.
Kenya.*macinnesi* Le Gros Clark & Leakey

Le Gros Clark & Leakey, 1950

L. Miocene.
Kenya.†*Pliopithecus* Gervais, 1849(Including †*Prohylobates* Fourtau, 1920)*tandyi* (Fourtau)Arambourg, 1943*c*; Fourtau, 1920; Remane, 1924L. Miocene.
Egypt.†*Proconsul* Hopwood, 1933(Including †*Xenopithecus* Hopwood, 1933)**africanus* Hopwood (Incl. **X. koruensis* Hopw.)Anonymous, 1948*b*; Arambourg, 1943*c*; Ashton & Zuckerman, 1950*b*; Gregory & Hellman, 1939*c*; Hopwood, 1933*a*, 1933*b*; MacInnes, 1943L. Miocene.
Kenya.*major* Le Gros Clark & Leakey

Le Gros Clark & Leakey, 1950

L. Miocene.
Kenya.*nyanzae* Le Gros Clark & Leakey

Le Gros Clark & Leakey, 1950

L. Miocene
Kenya.†*Dryopithecus* Auctorum*mogharensis* Fourtau

Fourtau, 1920; Remane, 1924

L. Miocene.
Egypt.†*Sivapithecus* Pilgrim, 1927*africanus* Le Gros Clark & Leakey

Le Gros Clark & Leakey, 1950

L. Miocene.
Kenya.

Pan Oken, 1816(Here including †*Proconsuloides* Lönnberg, 1937)†**naivashae** (Lönnberg)
Lönnberg, 1937Pleistocene.
Kenya.†**Australopithecus** Dart, 1925(For additional literature see *Australopithecus* in Nominal Index)***africanus** DartPleistocene.
South Africa.

Abel, W., 1931; Adloff, 1932; Arambourg, 1947c; Ashton & Zuckerman, 1950b; Bennejeant, 1936; Boule, 1946; Broom, 1934, 1939c, 1941d, 1943a, 1945b, 1946, 1950a; Dart, 1925a, 1934, 1949b; Gregory & Hellman, 1938; Hrdlička, 1925; von Koenigswald 1942; Schepers, 1946, 1949b; Schwarz, 1936; Elliot Smith, 1927

prometheus DartPleistocene.
South Africa.

Ashton & Zuckerman, 1950b; Broom, 1950a; Broom & Robinson, 1950d; Dart, 1948a, 1948b, 1948c, 1948d, 1948e, 1948g, 1949a, 1949b, 1949c, 1949d, 1949e, 1949g; Shapiro, 1949

†**Plesianthropus** Broom, 1938(? = *Australopithecus* Dart, 1925)(For additional literature see *Plesianthropus* in Nominal Index)***transvaalensis** (Broom)Pleistocene.
South Africa.

Arambourg, 1947c; Ashton & Zuckerman, 1950b; Boule, 1946; Broom, 1936c, 1937b, 1937c, 1938a, 1938b, 1938c, 1939a, 1939c, 1940b, 1941b, 1941d, 1943a, 1945b, 1946, 1947a, 1947b, 1947c, 1949a, 1950a; Broom & Robinson, 1947b, 1947c, 1948, 1949a; Gregory & Hellman, 1938, 1939a, 1939b, 1939c, 1940, 1945; Kern & Straus, 1949; von Koenigswald, 1942, 1948b; Schepers, 1946; Schwarz, 1936; Shaw, 1939a

†**Paranthropus** Broom, 1938(? = †*Australopithecus* Dart, 1925)(For additional literature see *Paranthropus* in Nominal Index)***robustus** BroomPleistocene.
South Africa.

Arambourg, 1947c; Ashton & Zuckerman, 1950b; Boule, 1946; Broom, 1938b, 1938c, 1939a, 1939c, 1941c, 1941d, 1942a, 1943a, 1943b, 1945b, 1946, 1950a; Gregory & Hellman, 1938, 1939c; Kaelin, 1949a; von Koenigswald, 1942; Schepers, 1946, 1949b; Shaw, 1939a; Straus 1948

crassidens BroomPleistocene.
South Africa.

Broom, 1949b, 1950a; Broom & Robinson, 1950a, 1950b, 1950c, 1950d, 1950e

Order LAGOMORPHA

Family *OCHOTONIDAE*†*Austrolagomys* Stromer, 1924**inexpectatus* Stromer

Stromer, 1924 (1923), 1926

simpsoni Hopwood

Hopwood, 1929b

L. Miocene.

S.W. Africa.

L. Miocene.

S.W. Africa.

Family *LEPORIDAE*• *Lepus* Linnaeus, 1758**timidus* Linnaeus

Arambourg, 1932b; Flamand, 1902 (1901)

aegyptius Desmarest

Campardou, 1917; Doumergue & Poirier, 1894; Estaunié, 1941

aegyptius tingitanus Doumergue

in Campardou, 1917

kabylicus De Winton

Arambourg 1938a; Howe & Movius, 1947; Romer, 1928

U. Pleistocene.

Algeria.

U. Pleistocene.

Morocco.

U. Pleistocene.

Morocco.

U. Pleistocene.

Morocco,

Algeria.

U. Pleistocene.

Rhodesia.

zuluensis Thomas & Schwann = *L. saxatilis zuluensis* T. & S.

Zealley, 1916

†*Serengetilagus* Dietrich, 1941**praecapensis* Dietrich

Dietrich, 1941, 1942a

L. Pleistocene.

Tanganyika.

Oryctolagus Lilljeborg, 1874**cuniculus* (Linnaeus)

Doumergue & Poirier, 1894; Gobert & Vaufrey, 1932; Howe & Movius, 1947; Joleaud, 1920b; Romer, 1928

Pleistocene.

Barbary.

Order RODENTIA

Family *SCIURIDAE**Xerus* Hemprich & Ehrenberg, 1832*capensis* A. Smith

Zealley, 1916

†*janenschii* Dietrich

Dietrich, 1941, 1942a

U. Pleistocene.

Rhodesia.

L. Pleistocene.

Tanganyika.

Family ?*THERIDOMYIDAE* incertae sedis†*Phiomys* Osborn, 1908**andrewsi* Osborn

Osborn, 1908; Schlosser, 1911; Stromer, 1924 (1923), 1926

L. Oligocene.

Egypt.

†*Metaphiomys* Osborn, 1908**beadnelli* Osborn

Osborn, 1908; Schlosser, 1911

L. Oligocene.

Egypt.

†*Paraphiomys* Andrews, 1914**pigotti* Andrews

Andrews, 1914

L. Miocene.

Kenya.

- †**Pomonomys** Stromer, 1922
- ***dubius** Stromer
Stromer, 1922 (1921), 1924 (1923), 1926 L. Miocene.
S.W. Africa.
- †**Apodecter** Hopwood, 1929
- ***stromeri** Hopwood
Hopwood, 1929b L. Miocene.
S.W. Africa.
- †**Phthynilla** Hopwood, 1929
- ***fracta** Hopwood
Hopwood, 1929b L. Miocene.
S.W. Africa.

Family *PEDETIDAE*

- †**Parapedetes** Stromer, 1924
- ***namaquensis** Stromer
Stromer, 1924 (1923), 1926 L. Miocene.
S.W. Africa.
- Pedetes** Illiger, 1811
- ***cafer** Pallas = *caffer* Auctorum
Zealley, 1916 Pleistocene.
Rhodesia.
- †**gracilis** Broom
Broom, 1930, 1934 Pleistocene.
South Africa.
- †**hagenstadi** Lyle
Dreyer & Lyle, 1931 Pleistocene.
South Africa.
- surdaster** Thomas
Dietrich, 1939, 1942a U. Pleistocene.
Tanganyika.

Family *CRICETIDAE***Mystromys** Wagner, 1841

- †**hausleitneri** Broom = emend. for *M. hauslichtneri* Broom, given
in error Pleistocene.
South Africa.
- Broom, 1937b, 1948a
- †**hausleitneri barlowi** Broom Pleistocene.
South Africa.
- Broom, 1948a

Microtus Schrank, 1798

- †**cyrenae** Bate
Bate, 1950 Pleistocene.
Cyrenaica.
- Gerbillus** Desmarest, 1804
- hirtipes** Lataste
Doumergue & Poirier, 1894 Pleistocene.
Morocco.

Tatera Lataste, 1882

- nigricauda** Peters
Dietrich, 1942a L. Pleistocene.
Tanganyika.

Meriones Illiger, 1811

- libycus** Lichtenstein = *M. shawi* Rozet = *Gerbillus sellysii* Pomel
Doumergue & Poirier, 1894 Pleistocene.
Barbary.
- †**Bramus** Pomel, 1892
- ***barbarus** Pomel
Joleaud, 1910; Pomel, 1892a Pleistocene.
Algeria.

Family *RHIZOMYIDAE***Tachyoryctes** Rüppell, 1835

***splendens** (Rüppell)
Dietrich, 1942a

L. Pleistocene.
Tanganyika.

Family *MURIDAE***Thallomys** Thomas, 1920

†**debruynei** Broom
Broom, 1948a

L. Pleistocene.
South Africa.

Rattus Fischer, 1803

(= *Mus* Auctorum, in part; includes *Mastomys* Thomas
as subgenus)

coucha A. Smith
Zealley, 1916
rattus Linnaeus
Ph. Thomas, 1884a

Pleistocene.
Rhodesia.
Pleistocene.
Algeria.

Cricetomys Waterhouse, 1840

***gambianus** Waterhouse
Zealley, 1916

Pleistocene.
Rhodesia.

Otomys F. Cuvier, 1823

(Including as subgenera *Myotomys* Thomas, 1918;
†*Palaeotomys* Broom, 1937)

***irroratus** (Brants)
Dreyer & Lyle, 1931
†**gracilis** (Broom)
Broom, 1937b
unisulcatus F. Cuvier
Dreyer & Lyle, 1931
turneri Wroughton
Dreyer & Lyle, 1931

Pleistocene.
South Africa.
Pleistocene.
South Africa.
Pleistocene.
South Africa.
Pleistocene.
South Africa.

Family *HYSTRICIDAE***Hystrix** Linnaeus, 1758

***cristata** Linnaeus
Arambourg, 1931a, 1931c, 1932b, 1933 (1931), 1938a, 1938b;
Arambourg, Boule, etc., 1934; Barone, 1944; Bourguignat,
1870; Doumergue, 1923, 1926b; Doumergue & Poirier,
1894; Estaunié, 1941; Flamand, 1902 (1901); Gobert &
Vaufrey, 1932; Howe & Movius, 1947; Pallary & Tomma-
sini, 1892 (1891); Petrocchi, 1941b; Pomel, 1888a, 1888b,
1894d; Romer, 1928; Ruhlmann, 1936
africae-australis Peters
Cooke, 1941a
galeata Thomas
Dietrich, 1942a; Hopwood, 1931c

Pleistocene.
Barbary.

Pleistocene.
South Africa.
Pleistocene.
Kenya,
Tanganyika.

Family *THRYONOMYIDAE***Thryonomys** Fitzinger, 1867(Including *Choeromys* Thomas, 1922)

- †**arkelli** Bate
Bate, 1947
Pleistocene.
Sudan.
- †**logani** Romer & Nesbit
Joleaud, 1936c; Romer & Nesbit, 1930
Pleistocene.
Algeria.
- swinderianus** Temminck = *calamophagus* de Beerst
Dietrich, 1949 (1948); Hopwood, 1931c; Joleaud, 1936c
Pleistocene.
Kenya,
Tanganyika.
- †**Neosciuromys** Stromer, 1922
- ***africanus** Stromer
Stromer, 1922 (1921), 1924 (1923), 1926
L. Miocene.
S.W. Africa.
- Phiomyoides** Stromer, 1924
- ***humilis** Stromer
Stromer, 1924 (1923), 1926
L. Miocene.
S.W. Africa.

Family *PETROMYIDAE***Petromus** A. Smith, 1831(= "*Petromys* A. Smith," Auctorum)

- †**minor** Broom
Broom, 1939b
Pleistocene.
South Africa.

Family *BATHYERGIDAE*†**Gypсорhynchus** Broom, 1934

- ***darti** Broom
Broom, 1930, 1934, 1939b
L. Pleistocene.
South Africa.
- makapani** Broom
Broom, 1948b
Pleistocene.
South Africa.
- minor** Broom
Broom, 1939b
L. Pleistocene.
South Africa.

Cryptomys Gray, 1864

- †**robertsi** Broom
Broom, 1937b
Pleistocene.
South Africa.

Heterocephalus Rüppell, 1842

- †**quenstedti** Dietrich
Dietrich, 1941, 1942a
L. Pleistocene.
Tanganyika.

†**Bathyergoides** Stromer, 1926

- ***neotertiarius** Stromer
Stromer, 1924 (1923), 1926
L. Miocene.
S.W. Africa.

Family *CTENODACTYLIDAE***Ctenodactylus** Gray, 1828

- gundi** (Rothman) (Includes **C. massonii* Gray)
Romer, 1928
Pleistocene.
Algeria.

Order CETACEA

Family *PROTOCETIDAE*†*Protocetus* Fraas, 1904**atavus* Fraas

Abel, 1905*a*, 1905*b*, 1914; Fraas, 1904*a*; Gregory, 1920; Kellogg, 1928, 1936; Weber, 1927–1928

M. Eocene.
Egypt.

†*Pappocetus* Andrews, 1920**lugardi* Andrews

Andrews, 1920 (1919); Kellogg, 1928, 1936

M. Eocene.
Nigeria.

†*Eocetus* Fraas, 1904

(= †*Mesocetus* Fraas, 1904, *nec* Moreno, 1892, *nec* Van Beneden, 1880)

**schweinfurthi* (Fraas) = *Zeuglodon macrospondylus* Stromer *non* Müller
Fraas, 1904*a*, 1904*c*; Kellogg, 1936; Stromer, 1908*b*

M. Eocene.
Egypt.

Family *DORUDONTIDAE*†*Dorudon* Gibbes, 1845

elliotsmithi (Dart) = *Zeuglodon osiris* G. E. Smith *non* Dames
Dart, 1923; Kellogg, 1936

U. Eocene.
Egypt.

intermedius (Dart) = *Zeuglodon osiris* Stromer *non* Dames, in part
Andrews, 1923*b*; Dart, 1923; Kellogg, 1928

U. Eocene.
Egypt.

osiris (Dames)

Abel, 1905*a*, 1905*b*, 1914; Andrews, 1901*c*, 1906, 1923*b*; Dames, 1894; Dart, 1923; Kellogg, 1928, 1936; Pompecki, 1922; Stromer, 1903*a*, 1903*c*, 1903*d*, 1908*a*, 1908*b*; Weber, 1927–1928

U. Eocene.
Egypt.

sensitivus (Dart)

Dart, 1923; Kellogg, 1936

U. Eocene.
Egypt.

stromeri (Kellogg) = *Zeuglodon osiris* Stromer *non* Dames, in part
Kellogg, 1936

U. Eocene.
Egypt.

zitteli (Stromer)

Stromer, 1903*c*, 1908*b*

U. Eocene.
Egypt.

Family *BASILOSAURIDAE*†*Prozeuglodon* Andrews, 1906

isis (Andrews) = **P. atrox* Andrews

Abel, 1914; Andrews, 1904*a*, 1906, 1908*b*, 1923*b*; Gregory, 1920; Kellogg, 1928, 1936; Stromer, 1908*b*; Weber, 1927–1928

U. Eocene.
Egypt.

†*Zeuglodon* Auctorum

brachyspondylus Stromer *non* Müller

Kellogg, 1936; Stromer, 1908*b*

U. Eocene.
Egypt.

Family *ACRODELPHIDAE*†*Schizodelphis* Gervais, 1861(= *Cyrtodelphis* Abel, 1900)**sulcatus* Gervais

Fourtau, 1920; Stromer, 1907b

L. Miocene.
Egypt.Family *DELPHINIDAE**Delphinus* Linnaeus, 1758†*van zelleri* Fourtau

Fourtau, 1920

L. Miocene.
Egypt.

Order CARNIVORA

Sub-Order CREODONTA

Family *HYAENODONTIDAE*†*Sinopa* Leidy, 1871*aethiopica* Andrews

Andrews, 1906; Schlosser, 1911

L. Oligocene.
Egypt.†*Metasinopa* Osborn, 1909**fraasi* Osborn

Osborn, 1909a; Schlosser, 1911

L. Oligocene.
Egypt.†*Apterodon* Fischer, 1881*altidens* Schlosser

Schlosser, 1910, 1911

L. Oligocene.
Egypt.*macrognathus* (Andrews)

Andrews, 1904a, 1906, 1907b; Osborn, 1908, 1909a; Schlosser, 1910, 1911

L. Oligocene.
Egypt.*minutus* Schlosser

Schlosser, 1910, 1911

L. Oligocene.
Egypt.†*Pterodon* Blainville, 1839*africanus* Andrews

Andrews, 1903c, 1906; Osborn, 1909a; Schlosser, 1910, 1911

L. Oligocene.
Egypt.*leptognathus* Osborn

Osborn, 1909a

L. Oligocene.
Egypt.*phiomensis* Osborn,

Osborn, 1909a

L. Oligocene.
Egypt.†*Hyaenodon* Laizer & Parieu, 1838*brachycephalus* Osborn = *brachygnathus* Osborn

Osborn, 1909a

L. Oligocene.
Egypt.†*Metapterodon* Stromer, 1924**kaiseri* Stromer

Stromer, 1924 (1923), 1926

L. Miocene.
S.W. Africa.

Sub-Order FISSIPEDA

Canis Linnaeus, 1758

(Including *Thos* Oken, 1816; *Lupulus* Blainville, 1843;
Lupulella Hilzheimer, 1906)

- *familiaris** Linnaeus
Clark, 1942; Ficheur & Brives, 1900; Flamand, 1902 (1901);
Howe & Movius, 1947; Pomel, 1897 (1896)*b*; Romer, 1928
Pleistocene.
Barbary,
Rhodesia.
- †**familiaris angustifrons** Pomel
Pomel, 1897 (1896)*b*
Pleistocene.
Algeria.
- †**familiaris getulus** Pomel
Pomel, 1897 (1896)*b*; Romer, 1928
Pleistocene.
Algeria.
- familiaris latifrons** Pomel
Pomel, 1897 (1896)*b*
Pleistocene.
Algeria.
- †**familiaris prokelb** Pomel
Pomel, 1897 (1896)*b*
Pleistocene.
Algeria.
- adustus** Sundevall
Clark, 1942; Hopwood, 1931*c*; Zealley, 1916
Pleistocene.
Kenya,
Rhodesia.
- †**africanus** Pohle
Dietrich, 1942*a*; Pohle, 1928
M. Pleistocene.
Tanganyika.
- †**antiquus** (Broom)
Broom, 1937*d*, 1939*d*, 1948*a*
Pleistocene.
South Africa.
- †**atrox** Broom
Broom, 1948*a*
Pleistocene.
South Africa.
- aureus** Linnaeus
Barone, 1944; Bourguignat, 1870; Campardou, 1917;
Depéret, Passemard & Rochette, 1928; Doumergue &
Poirier, 1894; Flamand, 1902 (1901); Howe & Movius,
1947; Marchand, 1932; Pomel, 1897 (1896)*b*; Romer, 1928
Pleistocene.
Barbary.
- aureus anthus** F. Cuvier
Arambourg, 1932*b*, 1938*a*, 1938*b*; Arambourg, Boule, etc.,
1934; Ennouchi, 1948*a*; Romer, 1928; Ruhlmann, 1936
Pleistocene.
Barbary.
- aureus maroccanus** Cabrera
Howe & Movius, 1947
Pleistocene.
Morocco.
- †**hypsogenys** Doumergue?
in Campardou, 1917
Pleistocene.
Morocco.
- mesomelas** Schreber
Dietrich, 1942*a*
L. Pleistocene.
Tanganyika.

Vulpes Oken, 1816

(Including part of *Cynalopex* Auctorum)

- vulpes** (Linnaeus) = **vulgaris* Oken
Arambourg, 1932*b*; Arambourg, Boule, etc., 1934; Débruge
& Mercier, 1914 (1913); Doumergue, 1913; Gobert &
Vaufrey, 1932; Howe & Movius, 1947; Romer, 1928
Pleistocene.
Barbary.
- vulpes aegyptiaca** (Sonnini) = *niloticus* Desmarest
Campardou, 1917; Doumergue & Poirier, 1894; Estaunié,
1941; Pallary & Tommasini, 1892 (1891)
Pleistocene.
Algeria.

- vulpes atlantica** A. Wagner
Arambourg, 1931*a*, 1932*b*, 1933 (1931), 1938*a*, 1938*b*; Arambourg, Boule etc., 1934; Bourguignat, 1870; Débruge & Mercier, 1914 (1913); Doumergue, 1913; Gobert & Vaufrey, 1932; Howe & Movius, 1947; Romer, 1928; Ruhlmann, 1936
- chama** (A. Smith)
Wells & Cooke, 1942
- †**pattisoni** Broom
Broom, 1948*a*
- †**pulcher** Broom
Broom, 1939*d*
- Fennecus** Desmarest, 1804
- ***zerda** Zimmermann
Romer, 1928
- Lycaon** Brookes, 1827
- picta** (Temminck) = **L. tricolor* Brookes
Arambourg, 1932*b*; Hopwood, 1931*c*; Joleaud, 1936*b*; Wells & Cooke, 1942
- Otocyon** Müller, 1836
(Including *Prototocyon* Pohle, 1928)
- †**recki** (Pohle)
Pohle, 1928
- Family *URSIDAE*
- Ursus** Linnaeus, 1758
- ***arctos** Linnaeus
Arambourg, 1927, 1931*a*, 1932*a*, 1933 (1931), 1933*c*, 1938*a*; Arambourg, Boule, etc., 1934; Barone, 1944; Depéret, Passemard & Rochette, 1928
- †**arctos lartetianus** Bourguignat = *letourneuxianus* Bourg. = *rouvieri* Bourg. = *libycus* Pomel
Arambourg, 1927, 1932*a*, 1933*c*, 1938*a*; Arambourg, Boule, etc., 1934; Barone, 1944; Bourguignat, 1868*a*, 1869, 1870; Campardou, 1917; Depéret, Passemard & Rochette, 1928; Flamand, 1902 (1901); Joleaud, 1910; Pomel, 1897 (1896)*b*
- †**arctos faidherbianus** Bourguignat
Arambourg, 1927, 1932*a*, 1933*c*, 1938*a*; Arambourg, Boule, etc., 1934; Bourguignat, 1867, 1868*a*, 1868*b*, 1868*c*, 1869, 1870
- †**spelaeus minor** Gaudry
Arambourg, 1932*a*, 1933*c*, 1938*a*; Arambourg, Boule, etc., 1934
- Family *MUSTELIDAE*
- Mustela** Linnaeus, 1758
(Including *Putorius* Frisch, 1775)
- nivalis numidicus** (Pucheran)
Romer, 1928
- Enhydriodon** Falconer, 1868
- †**africanus** Stromer
Stromer, 1932 (1931)*a*
- Pleistocene.
Barbary.
- U. Pleistocene.
South Africa.
- L. Pleistocene.
South Africa.
- Pleistocene.
South Africa.
- Pleistocene.
Algeria.
- Pleistocene.
Barbary,
Kenya,
South Africa.
- M. Pleistocene
Tanganyika.
- Pleistocene.
Barbary.
- Pleistocene.
Barbary.
- Pleistocene.
Barbary.
- Pleistocene.
Barbary.
- M. Pliocene?
S.W. Africa.

Lutra Brünnich, 1772

- ***lutra** (Linnaeus)
 Romer, 1928
 †**hessica** Lydekker
 Stromer, 1920
 †**libyca** Stromer
 Stromer, 1913
maculicollis Lichtenstein
 Hopwood, 1931c

Pleistocene.
 Algeria.
 Pliocene?
 Egypt.
 Pliocene?
 Egypt.
 U. Pleistocene.
 Kenya.

Herpestes Illiger, 1811

(Including *Calogale* Gray, 1864, in part, also *Myonax*
 Thomas, 1928, *Mungos* Auctorum)

- ***ichneumon** (Gmelin)
 Arambourg, 1938a; Campardou, 1917; Doumergue, 1923;
 Doumergue & Poirier, 1894; Romer, 1928
cauui (A. Smith)
 Dreyer & Lyle, 1931
 †**palaeogracilis** (Dietrich)
 Dietrich, 1941, 1942a
 †**palaeoserengensis** (Dietrich)
 Dietrich, 1941, 1942a
sanguineus Rüppell
 Dietrich, 1939; Reck & Kohl-Larsen, 1936

Pleistocene.
 Barbary.
 Pleistocene.
 South Africa.
 L. Pleistocene.
 Tanganyika.
 L. Pleistocene.
 Tanganyika.
 Pleistocene.
 Tanganyika.

Aonyx Lesson, 1827

- capensis** Schinz = **delalandi* Lesson
 Stromer, 1920
capensis hindei (Thomas)
 Hopwood, 1931c
 †**robustus** Lyle
 Dreyer & Lyle, 1931

Pliocene?
 Egypt.
 Pleistocene.
 Kenya.
 Pleistocene.
 South Africa.

Genetta Oken, 1816

- genetta afra** F. Cuvier
 Arambourg, Boule, etc., 1934; Romer, 1928

Pleistocene.
 Algeria.

Family **VIVERRIDAE****Atilax** F. Cuvier, 1826

- ***paludinosus** (G. Cuvier)
 [*galera* (Schreber), usually regarded as unidentifiable, may
 be this sp.]
 Dreyer & Lyle, 1931; Hopwood, 1931c; Zealley, 1916

Pleistocene.
 Kenya,
 Rhodesia,
 South Africa.

Crossarchus F. Cuvier, 1825

- †**transvaalensis** Broom
 Broom, 1937d, 1939d

Pleistocene.
 South Africa.

Cynictis Ogilby, 1833

(Including *Paracynictis* Pocock, 1916)

- selousi** de Winton [type species of *Paracynictis* Pocock]
 Zealley, 1916

Pleistocene.
 Rhodesia.

Family *HYAENIDAE*†*Lycyaena* Hensel, 1862*silberbergi* Broom

Broom, 1945a, 1948a

L. Pleistocene.
South Africa.*Crocota* Kaup, 1828(= *Hyaena* Auctorum, in part, = *Crocotta* Kaup, 1829)**crocota* (Erxleben)

Arambourg, 1932b, 1938a, 1938b; Arambourg, Boule, etc., 1934; Campardou, 1917; Cooke, 1949b; Depéret, Passermard & Rochette, 1928; Dietrich, 1939, 1942a; Doumergue, 1934; Gaillard, 1934; Gobert & Vaufrey, 1932; Hopwood, 1928a, 1931c; Joleaud, 1910; Kent, 1942b; Reck & Kohl-Larsen, 1936; Romer, 1928; Ruhlmann, 1936; Shapiro, 1943; Stromer, 1911; Wells & Cooke, 1942; Zealley, 1916

Pleistocene.
Generally
distributed.*crocota fisi* Heller

Dietrich, 1939

U. Pleistocene.
Tanganyika.†*crocota spelaea* (Goldfuss)

Arambourg, 1938a, 1938b; Campardou, 1917; Dalloni, 1940; Depéret, Passermard & Rochette, 1928; Flamand, 1902 (1901); Gaillard, 1934; Howe & Movius, 1947; Joleaud, 1910; Pallary, 1887b; Pomel, 1888a, 1888b, 1897 (1896)b; Stromer, 1911

Pleistocene.
Barbary,
Egypt.†*crocota subspelaea* Doumergue?

Doumergue, 1934. [Possibly the first mention of this name]

Pleistocene.
Algeria.†*spelaea capensis* BroomBroom, 1939d. [The cave hyaena *C. spelaea* (Goldf.), is a sub-species of *C. crocuta* (Erxl.), hence the sub-specific designation *capensis* Broom, 1939, is preoccupied by *capensis* Desmarest, 1817, itself a synonym of *crocota* Erxleben]Pleistocene.
South Africa.*Hyaena* Brünnich, 1772**hyaena* (Linnaeus) = *striata* Zimmermann = *vulgaris* Desmarest

Arambourg, 1938a; Broom, 1939d; Campardou, 1917; Dietrich, 1942a; Doumergue, 1923, 1934; Doumergue & Poirier, 1894; Flamand, 1902 (1901); Gobert & Vaufrey, 1932; Howe & Movius, 1947; Pomel, 1897 (1896)b; Romer, 1928; Stromer, 1911

Pleistocene.
Generally
distributed.*brunnea* Thunberg

Clark, 1942; Dreyer & Lyle, 1931; Pohle, 1928

Pleistocene.
Tanganyika,
Rhodesia,
South Africa.†*namaquensis* Stromer

Stromer, 1932 (1931)a

Pliocene?
S.W. Africa.Family *FELIDAE*†*Pseudaelurus* Gervais, 1850(Including *Afrosmilus* Kretzoi, 1929)*africanus* Andrews

Andrews, 1914; Kretzoi, 1929

L. Miocene.
Kenya.

Felis Linnaeus, 1758

- *catus** Linnaeus
Flamand, 1902 (1901)
- lybica** Forster
Arambourg, 1938a; Campardou, 1917; Débruge, 1903 (1902);
Howe & Movius, 1947
- lybica cafra** Desmarest
Pohle, 1928
- lybica ocreata** Gmelin
Chubb, 1909 (1908); Débruge & Mercier, 1914 (1913);
Doumergue, 1913; Gobert & Vaufrey, 1932; Romer, 1928
- †**whitei** Broom
Broom, 1937b, 1939d

s. g. **Lynx** Kerr, 1792

- *lynx** (Linnaeus)
Barbin, 1912
- caracal** (Schreber)
Dietrich, 1942a
- caracal algira** (Wagner) = *berberorum* Matschie
Romer, 1928

s. g. **Leptailurus** Severtzov, 1858

- *serval** (Schreber)
Chubb, 1909 (1908); Doumergue & Poirier, 1894; Romer,
1928
- †**serval hintoni** Hopwood
Hopwood, 1928a
- †**serval spelaeus** Broom
Broom, 1937d, 1939d

s. g. **Panthera** Oken, 1816(Including *Leo* Oken, 1816; *Pardus* Fitzinger, 1868)

- *pardus** (Linnaeus) = *leopardus* Schreber = *panthera* (Schreber)
Arambourg, 1931c, 1932b, 1938a; Bourguignat, 1870;
Campardou, 1917; Dietrich, 1939, 1942a; Doumergue, 1927;
Estaunié, 1941; Flamand, 1902 (1901); Hopwood, 1928a,
1939a, 1947a, 1947b; Howe & Movius, 1947; Kretzoi, 1929;
Pomel, 1888a, 1888b; Romer, 1928; Zealley, 1916
- †**pardus antiquus** (G. Cuvier)
Pomel, 1897 (1896)b
- †**pardus crassidens** (Broom)
Broom, 1948a
- leo** (Linnaeus)
Arambourg, 1932b, 1938a; Bourguignat, 1870; Broom,
1939d; Campardou, 1917; Chubb, 1909 (1908); Depéret,
Passebard & Rochette, 1928; Dietrich, 1939; Doumergue &
Poirier, 1894; Estaunié, 1941; Gobert & Vaufrey, 1932; Hop-
wood, 1928a, 1947a, 1947b; Howe & Movius, 1947; Joleaud,
1933h; Kretzoi, 1929; Lönnberg, 1937; Mennell & Chubb,
1907; Pallary, 1887b; Pomel, 1886 (1885)c, 1888a, 1888b;
Reck & Kohl-Larsen, 1936; Romer 1928; Stromer, 1911

- Pleistocene.
Algeria.
- Pleistocene.
Barbary.
- M. Pleistocene.
Tanganyika.
- Pleistocene.
Barbary.
Rhodesia.
- Pleistocene.
South Africa.
- Pleistocene.
Algeria.
- L. Pleistocene.
Tanganyika.
- Pleistocene.
Algeria.
- Pleistocene.
Algeria,
Rhodesia.
- Pleistocene.
Rhodesia.
- Pleistocene.
South Africa.
- Pleistocene.
Barbary,
Tanganyika,
Rhodesia.
- Pleistocene.
Algeria.
- Pleistocene.
South Africa.
- Pleistocene.
Generally
distributed.

- †**leo bleyenbergi** Lönnberg
Lönnberg, 1937
Pleistocene.
Kenya.
- †**leo shawi** (Broom)
Broom, 1948a
Pleistocene.
South Africa.
- †**leo spelaea** Auctorum
Depéret, Passemard & Rochette, 1928; Dietrich, 1939;
Pomel, 1897 (1896)*b*; Reck & Kohl-Larsen, 1936; Stromer,
1911
Pleistocene
Barbary,
Egypt,
Tanganyika.

Acinonyx Brookes, 1828

(= *Cynailurus* Wagler, 1830 = *Cynaëlurus* Gloger, 1841)

- jubatus** (Schreber) = **A. venator* Brookes
Hopwood, 1947a, 1947b; Romer, 1928; Zealley, 1916
Pleistocene.
Algeria,
Rhodesia.
- jubatus guttatus** Hermann
Romer, 1928
Pleistocene.
Algeria.
- †**Machairodus** Kaup, 1833
- ***aphanistus** (Kaup)
Stromer, 1913
U. Pliocene?
Egypt.
- transvaalensis** Broom
Broom, 1939d
L. Pleistocene.
South Africa.
- †**Meganthereon** Croizet & Jobert, 1828
- barlowi** Broom
Broom, 1937b, 1939d
Pleistocene.
South Africa.
- †**Homotherium** Fabrini, 1890
- ethiopicum** Arambourg
Arambourg, 1947a
L. Pleistocene.
Kenya.
- †**Hyaenaelurus** Biedermann, 1868
(emend. for *Hyainailouros* Biedermann, 1863)
- fourtaui** von Koenigswald
von Koenigswald, 1948a
L. Miocene.
Egypt.

Sub-Order PINNIPEDIA

Family PHOCIDAE

- †**Pristiphoca** Gervais, 1852
- occitana** Gervais
Stromer, 1913
U. Pliocene?
Egypt.

Order TUBULIDENTATA

Family ORYCTEROPODIDAE

Orycteropus Geoffroy, 1796

(Usually quoted as Geoffroy, 1795, but C. D. Sherborn could not find it)

- aethiopicus** Sundevall
Dietrich, 1939, 1942a; Hopwood, 1931c
Pleistocene.
Kenya,
Tanganyika.

Order PROBOSCIDEA

Sub-Order MOERITHERIOIDEA

Family *MOERITHERIIDAE*†*Moeritherium* Andrews, 1901

- *lyonsi** Andrews
 Abel, 1914; Andrews, **1901a**, 1901b, 1902d, 1903a, 1904c,
 1906; Matsumoto, 1923; Osborn, 1936; Schlosser, 1911;
 Weber, 1927-1928 U. Eocene.
 Egypt.
- ancestrale** Petronievics
 Osborn, 1936; Petronievics, **1923** M. Eocene.
 Egypt.
- andrewsi** Schlosser
 Matsumoto, 1923; Osborn, 1936, 1938; Schlosser, **1911** L. Oligocene.
 Egypt.
- gracile** Andrews
 Andrews, **1902a**, 1906; Matsumoto, 1923; Osborn, 1936;
 Schlosser, 1911 U. Eocene.
 Egypt.
- trigodon** Andrews, 1904 = *trigonodon* Andrews, 1906
 Andrews, **1904a**, 1906; Matsumoto, 1923; Osborn, 1936 U. Eocene.
 Egypt.

Sub-Order ELEPHANTOIDEA

Family *PALAEOMASTODONTIDAE*†*Palaeomastodon* Andrews, 1901

- *beadnelli** Andrews
 Abel, 1914; Andrews, **1901a**, 1901b, 1903a, 1904c, 1905,
 1906; Matsumoto, 1924; Osborn, 1936; Pontier, 1910 (1909);
 Weber, 1927-1928 L. Oligocene.
 Egypt.
- barroisi** Pontier
 Pontier, **1907** L. Oligocene.
 Egypt.
- intermedius** Matsumoto
 Matsumoto, **1922**, 1924; Osborn, 1936, 1938 L. Oligocene.
 Egypt.
- parvus** Andrews
 Andrews, **1905**, 1906; Matsumoto, 1924; Osborn, 1936 L. Oligocene.
 Egypt.
- †*Phiomia* Andrews & Beadnell, 1902
- *serridens** Andrews & Beadnell
 Andrews & Beadnell, **1902**; Andrews, 1902c, 1906; Osborn,
 1936; Schlosser, 1903 L. Oligocene.
 Egypt.
- minor** (Andrews)
 Andrews, **1904a**, 1905, 1906; Matsumoto, 1924; Osborn,
 1936, 1938 L. Oligocene.
 Egypt.
- osborni** Matsumoto
 Matsumoto, **1922**, 1924; Osborn, 1936, 1938 L. Oligocene.
 Egypt.
- wintoni** (Andrews)
 Abel, 1914; Andrews, **1905**, 1906, 1908a; Matsumoto, 1924;
 Osborn, 1936, 1938 L. Oligocene.
 Egypt.
- †*Hemimastodon* Pilgrim, 1912
- kisumuensis** (MacInnes)
 Arambourg, 1946 (1945); MacInnes, **1942** L. Miocene.
 Kenya.
- pygmaeus** (Depéret)
 Depéret, **1897** L. Miocene.
 Algeria.

†**Trilophodon** Falconer & Cautley, 1846(= *Gomphotherium* Auctorum non Burmeister, 1837)

- *angustidens** (Cuvier)
 Arambourg, 1933*a*, 1933*b*; Choubert & Ennouchi, 1946;
 Depéret, 1897; Fourtau, 1920; Gaudry, 1891*b*; Gervais, 1849*b* L. Miocene.
 Barbary,
 Egypt.
angustidens libyca (Fourtau) L. Miocene.
 Egypt.
spenceri (Fourtau) L. Miocene.
 Egypt.

†**Tetralophodon** Falconer & Cautley, 1846

- *longirostris** (Kaup) Pliocene?
 Choubert & Ennouchi, 1946; Ennouchi, 1949*a*, 1949*b*; Morocco,
 Roman, 1931 Tunisia.

†**Protanancus** Arambourg, 1945

- *macinnesi** Arambourg L. Miocene.
 Arambourg, 1946 (1945) Kenya.

†**Anancus** Auctorum

(*Anancus macroplus* Aymard is a *nomen nudum*. Lartet, 1859, and Lydekker, 1886, each listed it as a synonym of *Mastodon arvernensis* Croizet & Jobert, but this did not make it a valid name. Later authors copied their predecessors. O. P. Hay, 1923, described *Anancus brazosius* sp. nov., which became the type species of *Anancus* Hay non Aymard)

- *arvernensis** (Croizet & Jobert) L. Pleistocene.
 Choubert & Ennouchi, 1946; Depéret, Lavauden & Solignac, Barbary.
 1925; Ennouchi, 1949*a*; Gervais, 1849*b*; Solignac, 1927
kenyensis (MacInnes) L. Pleistocene.
 Arambourg, 1948*b*; MacInnes, 1942 Kenya.
osiris Arambourg L. Pleistocene.
 Arambourg, 1946 (1945), 1947*a*, 1947*b*, 1948*b*, 1949*a*; Aram- Morocco,
 bourg & Arnould, 1950 (1949); Ennouchi, 1949*b* Tunisia,
 Egypt.

Family *MAMMUTIDAE*†**Mammut** Blumenbach, 1799

- borsoni** (Hays) L. Pleistocene.
 Arambourg, 1948*b*, 1949*a*; Dalloni, 1940; Joleaud, 1910; Algeria.
 Pomel, 1896*a*; Savornin, 1920
turicensis (Schinz) Miocene.
 Gaudry, 1891*b* Algeria.

Family *STEGODONTIDAE*†**Stegolophodon** Schlesinger, 1917(Including *Stegotetrabelodon* Petrocchi, 1941)

- libycus** Petrocchi Pliocene?
 Petrocchi, 1943 Cyrenaica.
sahabianus Petrocchi Pliocene?
 Petrocchi, 1943 Cyrenaica.
syrcticus (Petrocchi) Pliocene?
 Petrocchi, 1941*a*, 1943 Cyrenaica.

†**Stegodon** Falconer, 1857**kaisensis** Hopwood = *fuchsi* MacInnesArambourg, 1948*b*; Hopwood, 1939*a*; Kent, 1942*b*; MacInnes, 1942L. Pleistocene.
Kenya,
Uganda.Family *ELEPHANTIDAE*

(The majority of the so-called species of elephants described from the Vaal River Gravels are founded on indeterminate fragments of teeth. We have thought it best to group them under two generic names, *Loxodonta* and *Mammuthus*, in order to emphasize the unnecessary multiplication of "species")

Loxodonta F. Cuvier, 1827(Including †*Palaeoloxodon* Matsumoto, 1924 = †*Pilgrimia* Osborn, 1924)**africana** (Blumenbach) = **capensis* F. CuvierArambourg, 1938*a*; Bourcart, 1933*b*; Chubb, 1909 (1908); Cooke, 1947*a*, 1949*b*; Dalloni, 1940; Dart, 1929*a*; Depéret & Mayet, 1923; Depéret, Mayet & Roman, 1923; Deraniyagala, 1948; Dietrich, 1939, 1942*a*; Ehrmann, 1920*b*; Ennouchi, 1949*b*, 1950*b*; Gervais, 1848–1852, 1850*a*, 1850*b*, 1851 (1850), 1859; Haughton, 1932*a*; Hopwood, 1928*a*, 1939*a*; Joleaud, 1910, 1914*a*, 1914*b*, 1933 (1931), 1934*a*, 1936*c*; Joleaud & Malavoy, 1931; Mennell & Chubb, 1907; Niçaise, 1870*a*; Osborn, 1934*a*, 1942; Pomel, 1896*a*; Romer, 1928; Stefanescu, 1919, 1924; Stehlin & Graziosi, 1935; Thomas, 1884*a*, 1884*d*U. Pleistocene.
Barbary,
Kenya,
Rhodesia.†**africana obliqua** DartDart, 1929*a*; Osborn, 1934*a*, 1942Recent?
South Africa.
Sub-recent.
Egypt.**africana pharaohensis** Deraniyagala

Deraniyagala, 1948

Pleistocene.
South Africa.†**andrewsi** (Dart)Arambourg, 1948*b*; Dart, 1929*a*; Osborn, 1934*a*, 1942

M. Pleistocene.

†**antiquus** (Falconer & Cautley)Arambourg, 1942, 1943 (1942); Bourcart, 1927, 1933*b*; Dietrich, 1916, 1925; Hopwood, 1926*a*, 1936*a*; Joleaud, 1914*a*, 1936*c*; Kent, 1941*b*, 1942*b*; Leakey, Hopwood & Reck, 1931; Lecomte, 1926; MacInnes, 1942; Osborn, 1928; Pomel, 1896*a*; Ramsay & Geikie, 1878; Reck, 1914*b*, 1922 (1921); Thomas, 1884*a*; Vaufreys, 1947Barbary,
Kenya,
Tanganyika.†**archidiskodontoides** (Haughton)Cooke, 1947*a*, 1949*b*; Haughton, 1932*a*; Osborn, 1934*a*, 1942Pleistocene.
South Africa.†**atlanticus** (Pomel)Arambourg, 1938*a*, 1938*b*, 1948*a*, 1948*b*; Boule, 1900*a*; Dalloni, 1940; Depéret & Mayet, 1923; Doumergue, 1922; Ennouchi, 1948*a*, 1949*b*, 1949*c*; Joleaud, 1910, 1914*a*, 1936*b*; Osborn, 1942; Pallary, 1887*a*, 1887*b*; Pomel, 1879, 1886 (1885)*a*, 1886 (1885)*b*, 1886 (1885)*c*, 1888*a*, 1888*b*, 1894*d*, 1896*a*; Romer, 1928; Ruhlmann, 1936; Solignac, 1927; Thomas, 1884*a*, 1884*d*; Tilho & Arambourg, 1938; Tommasini, 1886Pleistocene.
Barbary.

- †**atlanticus maroccanus** (Arambourg)
Arambourg, 1938a; Ennouchi, 1948a, 1949b, 1949c, 1950b
Pleistocene.
Morocco.
- †**darti** (Cooke)
Cooke, 1947a; Cooke & Clark, 1939; Osborn, 1942
Pleistocene.
Rhodesia.
- †**hanekomii** (Dart)
Cooke, 1947a, 1949b; Dart, 1929a; Osborn, 1934a, 1942
Pleistocene.
South Africa.
- †**jolensis** (Pomel) = *iolensis* Auctorum
Arambourg, 1938a; Boule, 1900a; Dalloni, 1940; Depéret & Mayet, 1923; Doumergue, 1922; Ennouchi, 1949b, 1950b; de Lamothe, 1904; Osborn, 1942; Pomel, 1896a; Romer, 1928
Pleistocene.
Barbary.
- †**kuhni** (Dart)
Dart, 1929a; Osborn, 1934a, 1942
Pleistocene.
South Africa.
- †**prima** Dart
Dart, 1929a; Osborn, 1934a, 1942
Pleistocene.
South Africa.
- †**recki** (Dietrich)
Arambourg, 1934b, 1942, 1943 (1942), 1947a, 1948b, 1949a; Devillers, 1948; Dietrich, 1916, 1925; Ennouchi, 1949b; Hopwood, 1926a, 1936a; Joleaud, 1928a; Kent, 1941b, 1942b; Leakey, Hopwood & Reck, 1931; MacInnes, 1942; Osborn, 1928, 1942
M. Pleistocene.
Abyssinia,
Tanganyika.
- †**subantiqua** (Haughton)
Haughton, 1932a; Osborn, 1934a, 1942
Pleistocene.
South Africa.
- †**sheppardi** (Dart)
Dart, 1927, 1929a; Osborn, 1928, 1934a, 1942
Pleistocene.
South Africa.
- †**transvaalensis** (Dart)
Cooke, 1947a, 1949b; Dart, 1927, 1929a; Osborn, 1928, 1934a, 1942
Pleistocene.
South Africa.
- †**wilmani** (Dart)
Cooke, 1947a, 1949b; Dart, 1929a; Osborn, 1934a, 1942
Pleistocene.
South Africa.
- †**yorki** (Dart)
Arambourg, 1948b; Dart, 1929a; Osborn, 1934a, 1942
Pleistocene.
South Africa.
- †**zulu** (Scott)
Cooke, 1947a, 1949b; Hopwood, 1926b; Osborn, 1928, 1934a, 1942; Scott, 1907
Pleistocene.
South Africa.

†**Mammuthus** Burnett, 1830

(Including *Archidiskodon* Pohlig and *Metarchidiskodon* Osborn as sub-genera)

- ***primigenius** (Blumenbach)
Gervais, 1849b, 1859
Pleistocene.
Algeria.
- broomii** (Dart)
Arambourg, 1948b; Cooke, 1947a, 1949b; Cooke & Wells, 1946; Dart, 1929a; Osborn, 1928, 1934a, 1942
Pleistocene.
South Africa.
- exoptatus** (Dietrich)
Dietrich, 1941, 1942a
L. Pleistocene.
Tanganyika.
- griqua** (Haughton)
Arambourg, 1948b; Cooke, 1947a; Dart, 1929a; Haughton, 1922 (1921); Hopwood, 1926b, 1939a; Osborn, 1928, 1934a, 1942
Pleistocene.
Uganda,
South Africa.

- loxodontoides** (Dart)
Dart, 1929a; Osborn, 1934a, 1942
- meridionalis** (Nesti)
Arambourg, 1938a, 1942, 1943 (1942), 1949a; Dalloni, 1940; Ennouchi, 1949b, 1950b; Gervais, 1849b, 1867-1869; Joleaud, 1910, 1912c, 1914a, 1933h; Niçaise, 1870a; Osborn, 1928; Pomel, 1896a; Romer, 1928; Savornin, 1920; Thomas, 1884a, 1884c
- meridionalis cromerensis** (Depéret)
Arambourg, 1938a
- milletti** (Dart)
Arambourg, 1948b; Dart, 1929a; Osborn, 1934a, 1942
- planifrons** (Falconer & Cautley)
Arambourg, 1948 (1947), 1948b, 1949a; Arambourg & Arnould, 1950 (1949); Dalloni, 1940; Doumergue, 1928; Joleaud, 1928a; Kent, 1941b; MacInnes, 1942; Romer, 1928
- proplanifrons** (Osborn)
Arambourg, 1948b; Osborn, 1934a, 1938, 1942
- subplanifrons** (Osborn)
Arambourg, 1948b; Cooke, 1947a, 1949b; Dart, 1929a; Haughton, 1932a; Osborn, 1928, 1934a, 1938, 1942
- vanalpheni** (Dart)
Arambourg, 1948b; Cooke, 1947a; Dart, 1929a; Osborn, 1934a
- yorki** (Dart)
Arambourg, 1948b; Dart, 1929a; Osborn, 1934a, 1942
- Pleistocene.
South Africa.
L. Pleistocene.
Barbary.
- L. Pleistocene.
Morocco.
Pleistocene.
South Africa.
Pleistocene.
Barbary,
Abyssinia,
Tanganyika.
Pleistocene.
South Africa.
Pleistocene.
South Africa.
- Pleistocene.
South Africa.
Pleistocene.
South Africa.

Sub-Order DEINOTHERIOIDEA

Family DEINOTHERIIDAE

†*Deinotherium* Kaup, 1829

- bozasi** Arambourg = *hopwoodi* Osborn = *giganteum* Auctorum non Kaup
Arambourg, 1934b, 1935 (1934), 1947a, 1948b; Dietrich, 1942a; Hopwood, 1936a; Joleaud, 1928a; Kent, 1941b; MacInnes, 1942; Osborn, 1936
- cuvieri** Auctorum non Kaup
Brives, 1919
- hobleyi** Andrews
Andrews, 1911a, 1911b, 1914; Dixey, 1944; MacInnes, 1942; Osborn, 1936
- L. Pleistocene.
Abyssinia,
Kenya,
Tanganyika.
- U. Miocene or
L. Pliocene.
Algeria.
L. Miocene.
Kenya.

Sub-Order BARYTHERIOIDEA

Family BARYTHERIIDAE

†*Barytherium* Andrews, 1901

(= *Bradytherium* Andrews, 1901, non Grandidier, 1901)

- *grave** (Andrews)
Abel, 1914; Andrews, 1901a, 1901b, 1906; Weber, 1927-1928
- L. Oligocene.
Egypt.

Order EMBRITHOPODA

Family *ARSINOITHERIIDAE*†*Arsinoitherium* Beadnell, 1902**zitteli* Beadnell

Abel, 1914; Andrews, 1902*c*, 1906; Beadnell, 1902; Lankester, 1903; Weber, 1927–1928

L. Oligocene.
Egypt.

andrewsi Lankester

Andrews, 1906; Lankester, 1903

L. Oligocene.
Egypt.

Order HYRACOIDEA

Family *PROCAVIIDAE*

(The Egyptian species arranged according to Matsumoto, 1926)

†*Pachyhyrax* Schlosser, 1910**crassidentatus* Schlosser

Hahn, 1934; Matsumoto, 1926; Schlosser, 1910, 1911

L. Oligocene.
Egypt.

†*Sagatherium* Andrews & Beadnell, 1902**antiquum* Andrews & Beadnell = *minus* Andrews & Beadnell

Andrews, 1906; Andrews & Beadnell, 1902; Hahn, 1934; Matsumoto, 1926; Osborn, 1906; Schlosser, 1910, 1911

L. Oligocene.
Egypt.

annectens Matsumoto = *antiquum* Andrews & Beadnell, in part
Matsumoto, 1926

L. Oligocene.
Egypt.

euryodon Matsumoto

Matsumoto, 1926

L. Oligocene.
Egypt.

macrodon Matsumoto = *majus* Schlosser, in part
Matsumoto, 1926

L. Oligocene.
Egypt.

sobrina Matsumoto

Matsumoto, 1926

L. Oligocene.
Egypt.

†*Prohyrax* Stromer, 1924**tertiarius* Stromer

Hahn, 1934; Stromer, 1924 (1923), 1926

L. Miocene.
S.W. Africa.

†*Pliohyrax* Osborn, 1899*championi* Arambourg

Arambourg, 1933*b*

L. Miocene.
Kenya.

Procavia Storr, 1780**capensis* (Pallas)

Hahn, 1934; Zealley, 1916

Pleistocene.
Rhodesia.

†*antiqua* Broom

Broom, 1930, 1934, 1948*a*

Pleistocene.
South Africa.

†*obermeyeri* Broom

Broom, 1937*b*, 1948*a*

Pleistocene.
South Africa.

†*robertsi* Broom

Broom, 1948*a*

Pleistocene.
South Africa.

†*transvaalensis* Shaw

Shaw, 1937; Wells, 1939

Pleistocene.
South Africa.

Family *GENIOHYIDAE*†*Geniohyus* Andrews, 1904

- ***mirus** Andrews
Andrews, 1904a, 1906, 1907b; Matsumoto, 1926; Schlosser, 1910, 1911; Weber, 1927–1928 L. Oligocene. Egypt.
- diphycus** Matsumoto
Matsumoto, 1926 L. Oligocene. Egypt.
- gigas** Matsumoto
Matsumoto, 1926 L. Oligocene. Egypt.
- magnus** (Andrews)
Andrews, 1904a, 1906, 1907b; Hahn, 1934; Matsumoto, 1921, 1926; Schlosser, 1910, 1911 L. Oligocene. Egypt.
- micrognathus** (Schlosser)
Hahn, 1934; Matsumoto, 1926; Schlosser, 1911 L. Oligocene. Egypt.
- subgigas** Matsumoto
Matsumoto, 1926 L. Oligocene. Egypt.
- †**Bunohyrax** Schlosser, 1910
- ***fajumensis** (Andrews)
Andrews, 1904a, 1906; Hahn, 1934; Matsumoto, 1926; Schlosser, 1910, 1911 L. Oligocene. Egypt.
- affinis** Matsumoto
Matsumoto, 1926 L. Oligocene. Egypt.
- major** (Andrews)
Andrews, 1904a, 1906; Hahn, 1934; Matsumoto, 1926; Schlosser, 1910, 1911 L. Oligocene. Egypt.
- †**Megalohyrax** Andrews, 1903
(= *Mixohyrax* Schlosser, 1910, in part)
- ***eocaenus** Andrews
Andrews, 1903c, 1906; Hahn, 1934; Matsumoto, 1921, 1926; Osborn, 1908; Schlosser, 1910, 1911 L. Oligocene. Egypt.
- minor** Andrews = *andrewsi* (Schlosser)
Andrews, 1904a, 1906; Hahn, 1934; Matsumoto, 1921, 1926; Schlosser, 1910, 1911 L. Oligocene. Egypt.
- niloticus** (Schlosser)
Hahn, 1934; Matsumoto, 1921, 1926; Schlosser, 1910, 1911; Weber, 1927–1928 L. Oligocene. Egypt.
- pygmaeus** Matsumoto
Matsumoto, 1921, 1926 L. Oligocene. Egypt.
- suillus** (Schlosser)
Hahn, 1934; Matsumoto, 1921, 1926; Schlosser, 1910, 1911 L. Oligocene. Egypt.
- †**Titanohyrax** Matsumoto, 1921
- ***palaeotherioides** (Schlosser)
Hahn, 1934; Matsumoto, 1921, 1926; Schlosser, 1910, 1911 L. Oligocene. Egypt.
- andrewsi** Matsumoto = *Megalohyrax minor* Andrews, in part
Hahn, 1934; Matsumoto, 1921, 1926 L. Oligocene. Egypt.
- schlosseri** Matsumoto = *Megalohyrax eocaenus* Schlosser, in part
Hahn, 1934; Matsumoto, 1921, 1926 L. Oligocene. Egypt.
- ultimus** Matsumoto
Matsumoto, 1921, 1926 L. Oligocene. Egypt.

Family *MYOHYRACIDAE*†*Myohyrax* Andrews, 1914

- **oswaldi* Andrews
Andrews, 1914; Stromer, 1924 (1923), 1926 L. Miocene.
Kenya.
- doederleini* Stromer
Hopwood, 1929b; Stromer, 1924 (1923), 1926 L. Miocene.
S.W. Africa.
- osborni* Hopwood
Hopwood, 1929b L. Miocene.
S.W. Africa.
- †*Protypotheroides* Stromer, 1922
- **beetzi* Stromer
Stromer, 1922 (1921), 1924 (1923), 1926 L. Miocene.
S.W. Africa.

Order SIRENIA

†*Protosiren* Abel, 1904

- **fraasi* Abel
Abel, 1904, 1906; Edinger, 1933, 1939; Priem, 1907, 1908 M. Eocene.
(1907); Sickenberg, 1931; Weber, 1927-1928 Egypt.
- †*Eotheroides* Palmer, 1899
(= *Eotherium* Owen, 1875, non Leidy, 1853; includes
Eosiren Andrews, 1902, *Archaeosiren* Abel, 1913)
- **aegyptiacum* (Owen)
Abel, 1904, 1914; Andrews, 1901c, 1906; Edinger, 1939; Eocene.
Owen, 1875; Sickenberg, 1931; Weber, 1927-1928 Egypt.
- libycum* (Andrews)
Andrews, 1902a, 1906; Edinger, 1933, 1939; Sickenberg, Eocene.
1931; Stromer, 1921; Weber, 1927-1928 Egypt.
- abeli* (Sickenberg)
Sickenberg, 1931, 1934 Eocene.
Egypt.
- majus* (Zdansky)
Zdansky, 1938 Eocene.
Egypt.

Trichechus Linnaeus, 1758(= *Manatus* Brunnich, 1772)

- †*coulombi* (Filhol)
Filhol, 1878 Eocene.
Egypt.

Order PERISSODACTYLA

Family *EQUIDAE*†*Hipparion* de Christol, 1832

(We follow tradition. *Hipparion* was at first a vernacular: as a generic name (genus caelebs) it dates from 1834. Thus it is antedated by *Hippotherium* Kaup, 1833, type-species *Hippotherium gracile* Kaup = *Equus primigenius* von Meyer.

As used here, *Hipparion* includes *Hypsoshipparion* Dietrich, *Libyhipparion* Joleaud, *Notoshipparion* Houghton, *Styloshipparion* van Hoepen)

- **gracile* (Kaup)
Bourcart, 1937; Choubert, 1946 (1945); Joleaud, 1910, Plio-
1912c, 1933b; Roman, 1931; Suess, 1932; Thomas, 1884a, Pleistocene.
1884c, 1886; Tounouër, 1878b Barbary.

- albertensis** Hopwood = *ethiopicum* Joleaud?
 Arambourg, 1947a, 1948b; Dietrich, 1941; 1942a; Hopwood, 1926b, 1937, 1941; Joleaud, 1933a, 1933b
 L.-M.
 Pleistocene.
 Abyssinia,
 Uganda,
 Kenya,
 Tanganyika.
- ambiguum** Pomel
 Arambourg, 1948b, 1949a; Pomel, 1897d; Savornin, 1920
 L. Pleistocene.
 Algeria.
- crassum** Gervais
 Solignac, 1927
 Pliocene.
 Tunisia.
- ethiopicum** (Joleaud)
 Joleaud, 1933a, 1933b
 L. Pleistocene.
 Abyssinia.
- hipkini** (van Hoepen)
 Cooke, 1950; van Hoepen, 1932a; Joleaud, 1933a, 1933b
 Pleistocene.
 South Africa.
- massoesylum** Pomel
 Joleaud, 1933a; Pomel, 1897d
 L. Pleistocene.
 Algeria.
- namaquense** (Haughton)
 Cooke, 1950; Haughton, 1932b; van Hoepen, 1932a; Joleaud, 1933b
 Pleistocene.
 South Africa,
 S.W. Africa.
- sitifensis** Pomel
 Arambourg, 1948b; Pomel, 1897d; Savornin, 1920
 L. Pleistocene.
 Algeria.
- steytleri** van Hoepen
 Cooke, 1949b, 1950; Haughton, 1932b; van Hoepen, 1930b, 1932a; Joleaud, 1933a, 1933b
 Pleistocene.
 South Africa.
- thomasi** (Joleaud)
 Joleaud, 1933b
 Pleistocene.
 Algeria.
- Hippotigris** Hamilton Smith, 1841
 (= *Zebra* J. A. Allen, 1909, *non* Shuttleworth, 1856 (Mollusca) = *Eurygnathohippus* van Hoepen, 1930 = *Kolpohippus* van Hoepen, 1930 = *Kraterohippus* van Hoepen, 1930 = *Sterrohippus* van Hoepen, 1930.
 In compiling the synonymy, we have followed Allen, 1939, for the Recent, and Cooke, 1950, for the fossil "species")
- zebra** Auctorum *non* Linnaeus
 Arambourg, 1938a, 1947a, 1948b; Bourdelle, 1934; Cooke, 1943, 1950; Fraas, 1907a; Hopwood, 1926b; Zealley, 1916
 Pleistocene.
 Generally distributed.
- †**broomi** (Cooke) = *harrisi* Broom, in part, = *simplex* van Hoepen
 Cooke, 1950; Haughton, 1932b; van Hoepen, 1930a
 Pleistocene.
 South Africa.
- burchelli** (Gray) = †*elongatus* (van Hoepen) = †*lylei* Dreyer = †*platyconus* van Hoepen = †*simplicissimus* van Hoepen
 Arambourg, 1931c, 1932b, 1935a, 1938a; Cooke, 1939, 1941a, 1943, 1948a, 1949b, 1950; Cooke & Wells, 1946; Débruge, 1909 (1908); Doumergue, 1927; Dreyer & Lyle, 1931; Gobert & Vaufrey, 1932; Grabham, 1920; Haughton, 1932b; van Hoepen, 1930a, 1930b; Hopwood, 1928a; Howe & Movius, 1947; Joleaud, 1910, 1918 (1916); Romer, 1928; Shapiro, 1943; Vaufrey, 1940; Wells & Cooke, 1942; Zealley, 1916
 Pleistocene.
 Widely distributed.
- burchelli antiquorum** (H. Smith) = *chapmanni* (Layard) = *wahlbergi* Pocock
 Bourdelle, 1934; Cooke, 1950; Haughton, 1932b
 Pleistocene.
 South Africa.

- burchelli böhmi** Matschie = *granti* de Winton
Dietrich, 1939, 1942a; Hopwood, 1928a; Joleaud, 1918 (1916)
Pleistocene.
Tanganyika,
Rhodesia.
- †**capensis** Broom = *cawoodi* Broom = *gigas* van Hoepen = *westphali* Dreyer
Broom, 1909b, 1913a, 1928a; Broom & Le Rich, 1937; Cooke, 1939, 1941, 1948a, 1949b, 1950; Cooke & Wells, 1946; Dreyer & Lyle, 1931; Haughton, 1932b; van Hoepen, 1930a; Shapiro, 1943; Wells & Cooke, 1942
Pleistocene.
South Africa.
- †**cornelianus** (van Hoepen)
Cooke, 1950; Haughton, 1932b; van Hoepen, 1930b
Pleistocene.
South Africa.
- grevyi** Oustalet [We avail ourselves of Cooke's suggestion that †*E. kuhni* Broom is synonymous to include †*fowleri* Wells, †*harrisi* Broom, †*louwi* van Hoepen, †*plicatus* van Hoepen, †*zietsmanni* Broom]
Arambourg, 1948b; Broom, 1928a, 1948a; Cooke, 1941, 1948a, 1949b, 1950; Cooke & Wells, 1946; Dreyer & Lyle, 1931; Haughton, 1932b; van Hoepen, 1930a, 1930b; Shapiro, 1943; Wells, 1941; Wells & Cooke, 1942
Pleistocene.
South Africa.
- †**helmei** (Dreyer)
Dreyer & Lyle, 1931; Haughton, 1932b
Pleistocene.
South Africa.
- †**mauritanicus** (Pomel)
Arambourg, 1938a, 1938b, 1948b; Boule, 1900; Dalloni, 1940; Doumergue, 1926a, 1927, 1934, 1935; Ennouchi, 1948a, 1949c, 1949d, 1949e; Flamand, 1902 (1901); Howe & Movius, 1947; Joleaud, 1910, 1934b, 1936c; Pomel, 1888a, 1888b, 1897d; Romer, 1928; Ruhlmann, 1936; Vaufreyc, 1940
Pleistocene.
Morocco,
Algeria.
- †**numidicus** (Pomel) = *stenonis* Ph. Thomas *non* Cocchi = *robustus* Auctorum?
Arambourg, 1948 (1947), 1948a, 1948b; Dalloni, 1940; Joleaud, 1910; Pomel, 1897d; Romer, 1928; Savornin, 1920; Thomas, 1884a, 1884c, 1884d, 1886; Tournouër, 1879a, 1879b
Pleistocene.
Algeria.
- †**oldowayensis** (Hopwood)
Hopwood, 1937; Kent, 1942b
M. Pleistocene.
Tanganyika.
- †**poweri** (Cooke)
Cooke, 1939, 1949b, 1950; Cooke & Wells, 1946
Pleistocene.
South Africa.
- quagga** (Gmelin)
Bourdelle, 1934; Cooke, 1941a, 1943, 1948a, 1949b, 1950; Cooke & Wells, 1946; Dietrich, 1939, 1942a; Dreyer & Lyle, 1931; Haughton, 1932b; Hopwood, 1931c, 1939a; Reck & Kohl-Larsen, 1936; Shapiro, 1943
Pleistocene.
Tanganyika,
South Africa.
- †**robustus** (van Hoepen) *non* Pomel
Haughton, 1932b; van Hoepen, 1930a
Pleistocene.
South Africa.
- †**sandwithi** (Haughton)
Cooke, 1949b, 1950; Cooke & Wells, 1946; Haughton, 1932b
Pleistocene.
South Africa.

Equus Linnaeus, 1758

(Including *Asinus* Frisch, 1775)

- *caballus** Linnaeus = *sivalensis* Falconer & Cautley
 Arambourg, 1938*a*; Bourguignat, 1870; Campardou, 1917;
 Doumergue, 1926*b*; Doumergue & Poirier, 1894; Flamand,
 1902 (1901); Gaillard, 1934; Joleaud, 1933*h*; Lydekker,
 1887; Petrocchi, 1941*b*; Thomas, 1879*a*; Tommasini, 1886;
 Vaufrey, 1940
 Pleistocene.
 Barbary,
 Sudan.
- asinus** Linnaeus
 Boule, 1900 (1899); Doumergue, 1926*b*, 1927, 1934, 1935;
 Doumergue & Poirier, 1894; Estaunié, 1941; Ficheur &
 Brives, 1900; Gaillard, 1934; Howe & Movius, 1947; Mar-
 chand, 1934*a*; Petrocchi, 1941*b*; Romer, 1928; Thomas,
 1884*a*, 1884*d*; Vaufrey, 1940
 Pleistocene.
 Barbary,
 Cyrenaica,
 Egypt.
- asinus africanus** Fitzinger
 Arambourg, 1938*a*; Campardou, 1917; Doumergue, 1927,
 1934, 1935; Estaunié, 1941; Ficheur & Brives, 1900; Gobert
 & Vaufrey, 1932; Pomel, 1897*d*; Romer, 1928; Stehlin &
 Graziosi, 1935; Thomas, 1884*a*, 1884*d*
 Pleistocene.
 Barbary.
- †**asinus atlanticus** Ph. Thomas
 Boule, 1900 (1899); Thomas, 1884*a*, 1884*d*
 Pleistocene.
 Algeria.
- †**asinus hydruntinus** Regalia
 Petrocchi, 1941*b*
 Pleistocene.
 Cyrenaica.
- somalicus** P. L. Sclater = *somaliensis* Auctorum
 Stehlin & Graziosi, 1935
 Pleistocene.
 Barbary.

Family *CHALICOTHERIIDAE*

†**Metaschizotherium** von Koenigswald, 1932

- hennigi** Dietrich
 Arambourg, 1948*a*; Dietrich, 1941, 1942*a*
 L. Pleistocene.
 Tanganyika.
- transvaalensis** George
 Cooke, 1950; George, 1950
 L. Pleistocene.
 Tanganyika.

Family *RHINOCEROTIDAE*

†**Teleoceras** Hatcher, 1894

- snowi** Fourtau
 Fourtau, 1920
 L. Miocene.
 Egypt.
- Dicerorhinus** Gloger, 1841
- †**tetriscus** (Falconer)
 Arambourg & Arnould, 1950 (1949); Neuville & Ruhlmann,
 1941
 Pleistocene.
 Tunisia.
- †**leptorhinus** (Cuvier) = *mercki* (Jaeger)
 Arambourg, 1931*c*, 1932*b*, 1935*a*, 1938*a*; Dalloni, 1940;
 Ennouchi, 1948*a*, 1949*b*; Joleaud, 1936*b*; Lartet, 1868; Neu-
 ville & Ruhlmann, 1941; Romer, 1928; Ruhlmann, 1936
 Pleistocene.
 Barbary.
- †**leptorhinus subinermis** (Pomel)
 Anderson, 1932; Campardou, 1917; Doumergue, 1934; Ficheur
 & Brives, 1900; Joleaud, 1910, 1931; Pomel, 1896 (1895)
 Pleistocene.
 Barbary.

†**Coelodonta** Bronn, 1831

- †**antiquitatis** (Blumenbach) = *tichorhinus* Cuvier = **boiei* Bronn Pleistocene.
Gaudry, 1879; Thomas, 1879*b*, 1884*a*, 1884*d* Algeria.

Ceratotherium Gray, 1867

- *simum** (Burchell) Pleistocene.
Arambourg, 1931*b*, 1938*a*, 1938*b*, 1948*b*, 1949*a*; Boule, 1900*a*; Breuning, 1924; Cooke, 1941*a*, 1950; Débruge, 1909 (1908); Devillers, 1948; Dietrich, 1939, 1942*b*, 1945; Ennouchi, 1948*a*, 1948*b*, 1949*b*, 1949*c*; Gregory, 1920; Hilzheimer, 1925; Hopwood, 1926*b*, 1928*a*; Howe & Movius, 1947; Joleaud, 1910, 1931; Kent, 1941*b*, 1942*a*, 1942*b*; Kohl-Larsen, 1940; Neuville & Ruhlmann, 1941; Reck, 1914*b*; Reck & Kohl-Larsen, 1936; Romer, 1928; Stromer, 1922 (1921) Generally distributed.
- †**simum mauritanicum** (Pomel) Pleistocene.
Boule, 1900*a*; Depéret, Passemard & Rochette, 1928; Joleaud, 1910, 1931; Pallary, 1887*b*; Pallary & Tommasini, 1892 (1891); Pomel, 1886 (1885)*a*, 1886 (1885)*b*, 1886 (1885)*c*, 1888*a*, 1888*b*, 1894*d*, 1896 (1895); Romer, 1928 Algeria.

†**Serengeticeros** Dietrich, 1942(Probably = *Ceratotherium* Gray, 1867)

- *efficax** Dietrich L. Pleistocene.
Dietrich, 1942*b*, 1945 Tanganyika.

Diceros Gray, 1821

- *bicornis** (Linnaeus) = *whitei* Chubb, in part Pleistocene.
Breuning, 1924; Chubb, 1909 (1908); Cooke, 1949*b*, 1950; Dietrich, 1939, 1942*b*, 1945; Gregory, 1920; Hopwood, 1928*a*, 1931*c*, 1939*a*, 1939*b*; Joleaud, 1910; Kent, 1942*b*; Mennell & Chubb, 1907; Reck & Kohl-Larsen, 1936 Kenya, Tanganyika.
- bicornis holmwoodi** (Sclater) U. Pleistocene.
Dietrich, 1945; Hopwood, 1939*b* Tanganyika.

Order ARTIODACTYLA

Sub-Order SUIFORMES

Family *CEBOCHOERIDAE*†**Mixtotherium** Filhol, 1880

- mezi** Schmidt L. Oligocene.
Schmidt, 1913 Egypt.

Family *SUIDAE*†*Listriodon* H. von Meyer, 1846*jeanneli* Arambourg
Arambourg, 1933bL. Miocene.
Kenya.†*Sivachoerus* Pilgrim, 1926*giganteus* (Falconer & Cautley)
Tobien, 1936L. Pleistocene.
Egypt.*Koiropotamus* Gray, 1843(= *Potamochoerus* Gray, 1854 = *Choiropotamus* Gray, 1843)*porcus koiropotamus* (Desmoulins)Pleistocene.
Kenya.

Cooke, 1949a; Hopwood, 1931c; Kent, 1942b

†*limnetes* (Hopwood)

Pleistocene.

Arambourg, 1943a; Cooke, 1949a; Hopwood, 1926b; Joleaud, 1933g; Leakey, 1942, 1943b

Kenya,
Tanganyika,
Uganda.†*majus* Hopwood

Pleistocene.

Arambourg, 1943a; Cooke, 1949a; Dietrich, 1942a; Hopwood, 1934; Kent, 1942b; Leakey, 1942

Tanganyika.

Sus Linnaeus, 1758**scrofa* LinnaeusPleistocene.
Barbary.

Arambourg, 1938a, 1938b; Arambourg, Boule, etc., 1934; Boule, 1900a; Bourguignat, 1870; Débruge, 1909 (1908); Doumergue, 1923, 1926b, 1927; Doumergue & Poirier, 1894; Estaunié, 1941; Flamand, 1902 (1901); Gobert & Vaufrey, 1932; Howe & Movius, 1947; Joleaud, 1910, 1918 (1916), 1933g, 1936c; Joleaud & Lombard, 1933, 1934 (1933); Pallary & Tommasini, 1892 (1891); Pomel, 1888a, 1888b, 1894d; Romer, 1928; Ruhlmann, 1936; Vuillemot, 1937

scrofa algeriensis PomelPleistocene.
Barbary.

Arambourg, 1938a; Arambourg, Boule, etc., 1934; Boule, 1900a; Campardou, 1917; Doumergue, 1934; Joleaud, 1910, 1933g; Pomel, 1897b

barbarus PomelPleistocene.
Barbary.[We are uncertain whether this species is the same as *Sus barbarus* Sclater, 1860, = *S. algira* Locke, 1867.]

Boule, 1900a; Doumergue, 1907; Flamand, 1902 (1901); Howe & Movius, 1947; Joleaud, 1910, 1933g; Pomel, 1897b

†*Omochoerus* Arambourg, 1943*heseloni* (Leakey) = **pachygnathus* ArambourgL. Pleistocene.
Abyssinia.

Arambourg, 1943a, 1947a; Cooke, 1949a; Leakey, 1943b

grabhami (Hopwood)Pleistocene.
Sudan.

Arambourg, 1943a; Bouet & Neuville, 1930; Hopwood, 1929a

phacochoeroides (Ph. Thomas)Pleistocene.
Barbary.

Joleaud, 1927a, 1933g; Romer, 1928; Thomas, 1884a, 1884c

Hylochoerus Thomas, 1904(Including *Mesochorus* Shaw & Cooke)

- *meinerzhageni** O. Thomas
Hopwood, 1931c
U. Pleistocene.
Kenya.
- †**euilus** Hopwood
Arambourg, 1943a; Bouet & Neuville, 1930; Dietrich, 1942a; Hopwood, 1926b
L. Pleistocene.
Tanganyika, Uganda.
- †**olduvaiensis** (Leakey)
Cooke, 1949a; Leakey, 1942
M. Pleistocene.
Tanganyika.
- †**paiceae** (Broom)
Arambourg, 1948b; Broom, 1931, 1937b; Cooke, 1949a, 1949b; Shaw & Cooke, 1941
Pleistocene.
South Africa.
- †**Metridiochoerus** Hopwood, 1926
(= *Kolpochoerus* van Hoepen & van Hoepen, 1932, = *Pronotochoerus* Leakey, 1943, = *Tapinochoerus* van Hoepen & van Hoepen, 1932)
- *andrewsi** Hopwood
Arambourg, 1943a, 1947a, 1948b; Hopwood, 1926a
Pleistocene.
Abyssinia, Kenya, South Africa.
- jacksoni** (Leakey)
Cooke, 1949a; Leakey, 1943b
L. Pleistocene.
Abyssinia.
- meadowsi** (Broom)
Arambourg, 1943a; Broom, 1928a, 1948a; Cooke, 1949a; Shaw, 1938, 1939b
Pleistocene.
South Africa.
- modestus** (van Hoepen & van Hoepen)
Arambourg, 1943a; Cooke, 1949a, 1949b; van Hoepen & van Hoepen, 1932; Shaw, 1939b
Pleistocene.
South Africa.
- shawi** (Dale)
Dale, 1948
Pleistocene.
South Africa.
- sinuosus** (van Hoepen & van Hoepen)
Arambourg, 1943a; Cooke, 1949a; van Hoepen & van Hoepen, 1932; Shaw, 1939b
Pleistocene.
South Africa.
- †**Notochoerus** Broom, 1925
(Includes *Gerontochoerus* Leakey, 1943)
- *capensis** Broom
Arambourg, 1943a, 1947a, 1948b; Broom, 1925c; Cooke, 1949a, 1949b; Shaw, 1938, 1939b
Pleistocene.
Abyssinia, Tanganyika, South Africa.
- broomi** Shaw & Cooke
Cooke, 1949a; Shaw & Cooke, 1941
Pleistocene.
South Africa.
- dietrichi** Hopwood
Cooke, 1949a; Hopwood, 1934; Kent, 1942b; Leakey, 1942; Vaufrey, 1947
M. Pleistocene.
Kenya, Tanganyika.
- scotti** (Leakey)
Cooke, 1949a; Leakey, 1943b
L. Pleistocene.
Abyssinia.
- serengetensis** Dietrich
Arambourg, 1943a; Dietrich, 1942a
L. Pleistocene.
Tanganyika.

"Phacochoerus Cuvier, 1817"

(Universally quoted thus, but properly *Eureodon* G. Fischer, 1817, or *Phascochoerus* Ranzani, 1821: here includes †*Afrochoerus* Leakey, 1942, †*Stylochoerus* van Hoepen & van Hoepen, 1932, †*Synaptochoerus* van Hoepen & van Hoepen, 1932)

***aethiopicus** (Pallas)

Arambourg, 1932*b*; Broom, 1913*a*; Chubb, 1909 (1908); Cooke, 1939, 1941, 1948, 1949*a*, 1949*b*; Dietrich, 1939; van Hoepen & van Hoepen, 1932; Hopwood, 1926*a*, 1928*a*; Howe & Movius, 1947; Joleaud, 1910, 1933*g*, 1934*a*; Leakey, 1942; Mennell & Chubb, 1907; Pomel, 1894*d*; Romer, 1928; Ruhlmann, 1936; Shapiro, 1943; Shaw, 1939*b*; Wells & Cooke, 1942; Zealley, 1916

Pleistocene.
Generally distributed.

africanus (Gmelin)

Arambourg, 1938*a*, 1938*b*, 1943*a*, 1947*a*, 1948*b*; Cooke, 1949*a*, 1949*b*; Cooke & Wells, 1946; Dietrich, 1942*a*; Ennouchi, 1948*a*; van Hoepen & van Hoepen, 1932; Hopwood, 1931*c*; Joleaud, 1933*g*, 1936*b*, 1936*c*; Joleaud & Menchikoff, 1934; Shaw, 1939*b*

Pleistocene.
Generally distributed.

[The following are probably sub-species or synonyms of one or other of the above]

†**altidens** Shaw & Cooke

Cooke, 1949*a*, 1949*b*; Cooke & Wells, 1946; Shaw & Cooke, 1941

Pleistocene.
South Africa.

†**antiquus** Broom

Broom, 1948*a*

Pleistocene.
South Africa.

†**barbarus** Pomel, see *Sus barbarus*†**compactus** (van Hoepen & van Hoepen)

Arambourg, 1943*a*; Cooke, 1948*a*, 1949*a*, 1949*b*; Cooke & Wells, 1946; van Hoepen & van Hoepen, 1932; Shaw, 1939*b*; Wells & Cooke, 1942

Pleistocene.
South Africa.

†**complectidens** Leakey

Cooke, 1949*a*; Leakey, 1942

M. Pleistocene.
Tanganyika.

†**congolensis** van Straelen

van Straelen, 1942

Pleistocene.
Congo.

†**dreyeri** Lyle

Dreyer & Lyle, 1931; Shaw, 1939*b*

Pleistocene.
South Africa.

†**helmei** Dreyer & Lyle

Cooke, 1949*a*; Dreyer & Lyle, 1931; Shaw, 1939*b*; Wells & Cooke, 1942

Pleistocene.
South Africa.

†**hieroglyphicus** (van Hoepen & van Hoepen)

Arambourg, 1943*a*; Cooke, 1949*a*; van Hoepen & van Hoepen, 1932; Shaw, 1939*b*

Pleistocene.
South Africa.

†**laticolumnatus** (van Hoepen & van Hoepen)

Arambourg, 1943*a*; Cooke, 1949*a*; van Hoepen & van Hoepen, 1932; Shaw, 1939*b*

Pleistocene.
South Africa.

- †**mauritanicus** Pomel
 Doumergue, 1927; Flamand, 1902 (1901); Joleaud, 1910, 1933g; Howe & Movius, 1947; Pomel, 1897b; Romer, 1928
 Pleistocene.
 Barbary.
- †**meiringi** Dreyer & Lyle
 Cooke, 1949a; Dreyer & Lyle, 1931; Shaw, 1939b
 Pleistocene.
 South Africa.
- †**nicoli** (Leakey)
 Cooke, 1949a; Leakey, 1942
 M. Pleistocene.
 Tanganyika.
- †**stenobunus** Pia
 Cooke, 1949a; Pia, 1930
 Pleistocene.
 S.W. Africa.
- †**venteri** Dreyer & Lyle
 Cooke, 1949a; Dreyer & Lyle, 1931; Shaw, 1939b
 Pleistocene.
 South Africa.
- †**Diamantohyus** Stromer, 1922
- ***africanus** Stromer
 Stromer, 1922 (1921), 1924 (1923), 1926
 L. Miocene.
 S.W. Africa.
- Family *ANTHRACOTHERIIDAE*
- †**Rhagatherium** Pictet, 1856
- aegyptiacum** Andrews
 Andrews, 1906; Schmidt, 1913
 L. Oligocene.
 Egypt.
- †**Brachyodus** Depéret, 1895
 (Including *Bothriogenys* Schmidt, 1913, as a sub-genus)
- africanus** Andrews
 Andrews, 1899; Fourtau, 1920; Stromer, 1907b
 L. Miocene.
 Egypt.
- andrewsi** Schmidt
 Schmidt, 1913
 L. Oligocene.
 Egypt.
- fraasi** Schmidt
 Schmidt, 1913; Weber, 1927–1928
 L. Oligocene.
 Egypt.
- gorringei** (Andrews & Beadnell)
 Andrews, 1906; Andrews & Beadnell, 1902; Osborn, 1908; Schmidt, 1913
 L. Oligocene.
 Egypt.
- moneyi** Fourtau
 Fourtau, 1920
 L. Miocene.
 Egypt.
- moneyi strictidentata** Fourtau
 Fourtau, 1920
 L. Miocene.
 Egypt.
- parvus** (Andrews)
 Andrews, 1906; Schmidt, 1913
 L. Oligocene.
 Egypt.
- rugulosus** Schmidt
 Schmidt, 1913
 L. Oligocene.
 Egypt.
- †**Masritherium** Fourtau, 1920
- ***depereti** Fourtau
 Fourtau, 1920
 L. Miocene.
 Egypt.
- †**Gelasmodon** Forster-Cooper, 1913
 (= *Libycosaurus* Bonarelli, 1947)
- petrocchii** (Bonarelli)
 Bonarelli, 1947
 [L. Miocene ?]
 Cyrenaica.

†*Merycops* Pilgrim, 1910*africanus* Andrews

Andrews, 1914

L. Miocene.

Kenya.

Merycopotamus Falconer & Cautley, 1848**dissimilis* Falconer & Cautley

Boule, 1910c; Roman, 1931; Roman & Solignac, 1934

L. Pliocene.

Tunisia.

africanus Boule

Boule, 1910a, 1910c

L. Pliocene.

Tunisia.

Family HIPPOPOTAMIDAE

Hippopotamus Linnaeus, 1758(= *Hippoleakius* Deraniyagala, 1947)**amphibius* Linnaeus (including †*helmei* Lyle, †*icosiensis* Pomel, †*major* Cuvier, †*ponderosus* Scott, †*robustus* Fraas, †*sirensis* Pomel, †*venteri* Lyle, †*westphali* Lyle as sub-species or synonyms)

Pleistocene.

Generally

distributed.

Anthony, 1946; Arambourg, 1931c, 1938a, 1938b, 1944, 1948 (1947), 1948b, 1949b; Boule, 1900a; Bourcart, 1933b; Broom, 1913a; Cooke, 1939, 1949a, 1949b; Cooke & Wells, 1946; Dalloni, 1940; Deraniyagala, 1947; Devillers, 1948; Dietrich, 1926, 1939; Doumergue, 1934; Dreyer & Lyle, 1931; Ennouchi, 1948a, 1949c; Falconer, 1864, 1865; Ficheur & Brives, 1900; Flamand, 1902 (1901); Fraas, 1907a; Gaillard, 1934; Gervais, 1859, 1867–1869; Haughton, 1922 (1921); Hopwood, 1926a, 1926b, 1931c; Howe & Movius, 1947; Joleaud, 1910, 1912c, 1923a, 1934a, 1936b, 1936c; Joleaud & Lombard, 1933; Joleaud & Menchikoff, 1934; Neuville & Ruhlmann, 1941; Pomel, 1886 (1885)b, 1886 (1885)c, 1890b, 1896d; Reck & Dietrich, 1923; Reck & Kohl-Larsen, 1936; Roman, 1934, 1935 (1934); Romer, 1928; Scott, 1907; Solignac, 1927; Thomas, 1884a, 1884c, 1884d; Wells & Cooke, 1942; Zealley, 1916

†“*annectens* Falconer”

Pleistocene.

Falconer, 1865; Joleaud, 1923a; Morton, 1849; Pomel, 1896d

Egypt.

†*gorgops* Dietrich (probably = *H. amphibius kaisensis* Hopwood)

L.–M. Pleistocene.

Dietrich, 1926, 1928; Hopwood, 1926b, 1939a; Kent, 1942b; Leakey, Hopwood & Reck, 1931; Vaufrey, 1947

Kenya,

Tanganyika.

†*hipponensis* Gaudry

Pleistocene.

Andrews, 1902b; Arambourg, 1944, 1945 (1944), 1947a; Dalloni, 1940; Depéret, 1921; Gaudry, 1876a, 1876b; Joleaud, 1910, 1921 (1920), 1923a, 1933c; Papier, 1876, 1878; Pomel, 1876, 1878b, 1890b, 1896d; Romer, 1928; Savornin, 1920; Stromer, 1907b, 1914; Thomas, 1879a, 1884a; Vaufrey, 1928

Barbary,

Egypt.

†*imaguncula* Hopwood

L. Pleistocene.

Arambourg, 1934b; Hopwood, 1926b, 1939a; Kent, 1942b

Kenya,

Uganda.

- †**protamphibius** Arambourg
 Anthony, 1946, 1948; Arambourg, 1944, 1945 (1944), 1947a, 1948b
 L. Pleistocene.
 Abyssinia.
- protamphibius andrewsi** Arambourg
 Arambourg, 1947a
 M. Pliocene.
 Egypt.
- †**Prechoeropsis** Deraniyagala, 1948
- ***pharaohensis** Deraniyagala
 Deraniyagala, 1948
 U. Pleistocene.
 Egypt.

Sub-Order TYLOPODA

Family CAMELIDAE

Camelus Linnaeus, 1758

- dromedarius** Linnaeus
 Arambourg, 1932b, 1935a, 1938a; Pomel, 1893c; Romer, 1928; Thomas, 1884a, 1884b
 Pleistocene.
 Algeria.
- †**thomasi** Pomel
 Arambourg, 1938a; Dalloni, 1940; Joleaud, 1910; Pallary, 1887b, 1900; Pomel, 1886 (1885)a, 1886 (1885)c, 1888a, 1888b, 1893c
 Pleistocene
 Algeria.

Sub-Order RUMINANTIA

Family TRAGULIDAE

†**Dorcatherium** Kaup, 1833

- chappuisi** Arambourg
 Arambourg, 1933b
 L. Miocene.
 Kenya.

Family CERVIDAE

Cervus Linnaeus, 1758

- ***elaphus** Linnaeus
 Arambourg, 1938a; Boule, 1900a; Joleaud, 1910, 1913 (1912), 1926b, 1935a; Romer, 1928
 Pleistocene.
 Barbary.
- elaphus barbarus** Bennett
 Campardou, 1917; Joleaud, 1910, 1912b, 1913 (1912), 1926b, 1935a; Romer, 1928
 Pleistocene.
 Barbary.

†**Megaceroides** Joleaud, 1914

- algericus** (Lydekker) = ***pachygenys** Pomel
 Arambourg, 1931c, 1932b, 1938a, 1938b; Arambourg, Boule etc., 1934; Dalloni, 1940; Ficheur & Brives, 1900; Joleaud, 1910, 1912a, 1913 (1912), 1914c, 1916 (1915), 1926b, 1930, 1935a; Lydekker, 1890; Romer, 1928
 Pleistocene.
 Barbary.

Dama Frisch, 1775

- ***dama** (Linnaeus)
 Joleaud, 1910, 1912b, 1926b, 1935a; Romer, 1928
 Pleistocene.
 Barbary.
- dama schaeferi** Hilzheimer
 Joleaud, 1935a
 Pleistocene.
 Egypt.

Capreolus Frisch, 1775

- †**matheronis** (Gervais)
 Roman, 1931
 L. Pliocene.
 Tunisia.

Family *LAGOMERYCIDAE*†*Climacoceras* MacInnes, 1936**africanus* MacInnes
MacInnes, 1936L. Miocene.
Kenya.Family *GIRAFFIDAE*†*Palaeotragus* Gaudry, 1861(Including *Achtiaria* Borissiak, 1914)*coelophrys* (Rodler & Weithofer)
Joleaud, 1937; Suess, 1932L. Pliocene.
Algeria.*Okapia* Lankester, 1901†*stiliei* Dietrich
Dietrich, 1941, 1942aL. Pleistocene.
Tanganyika.*Giraffa* Brünnich, 1772(= *Camelopardalis* Schreber, 1784)**camelopardalis* (Linnaeus) = *giraffa* Gmelin
Arambourg, 1947a, 1948 (1947), 1948b; Cooke & Wells,
1947; Dietrich, 1939, 1942a; Hopwood, 1928a; Howe &
Movius, 1947; Joleaud, 1926b, 1934a, 1936b, 1936c; Pallary,
1900; Romer, 1928Pleistocene.
Generally
distributed.*camelopardalis capensis* (Lesson)
Hopwood, 1936a; Kent, 1942bL. & M. Pleis-
tocene.
Kenya,
Tanganyika.
L. Pleistocene.
Abyssinia.†*gracilis* Arambourg
Arambourg, 1947a†*Sivatherium* Falconer & Cautley, 1835*olduvaiensis* (Hopwood)
Arambourg, 1947a, 1948b; Dietrich, 1937b, 1942a; Hop-
wood, 1934, 1936a; Kent, 1942b; Vaufreys, 1947L. & M. Pleis-
tocene.
Abyssinia,
Kenya,
Tanganyika.†*Griquatherium* Haughton, 1922**cingulatum* Haughton
Cooke & Wells, 1947; Haughton, 1922 (1921); Joleaud,
1937Pleistocene.
South Africa.*haughtoni* Cooke
Cooke, 1949bPleistocene.
South Africa.†*Orangiatherium* van Hoepen, 1932(? = *Griquatherium* Haughton, 1922)**vanrhyni* van Hoepen
van Hoepen, 1932bPleistocene.
South Africa.†*Libytherium* Pomel, 1893**maurusium* Pomel
Arambourg, 1948 (1947), 1948a, 1948b, 1949a; Arambourg
& Arnould, 1950 (1949); Dalloni, 1940; Joleaud, 1926b,
1936b, 1937; Pomel, 1892b, 1893c; Romer, 1928Pleistocene.
Barbary,
Egypt.

Family *BOVIDAE*Sub-Family *Bovinae*†*Palaeoreas* Gaudry, 1861*gaudryi* (Ph. Thomas)

Dietrich, 1950; Joleaud, 1910, 1936–37 (1935); Thomas, 1884a, 1884c

Pleistocene.
Algeria,
Tanganyika.

Strepsiceros Hamilton Smith, 1827**strepsiceros* H. Smith (including *kudu* Gray)

Chubb, 1909 (1908); Cooke, 1949b; Dietrich, 1939, 1950; Dreyer & Lyle, 1931; Gervais, 1867–1869; Hopwood, 1928a; Mennell & Chubb, 1907; Rütimeyer, 1877, 1878; Schwarz, 1937

Pleistocene.
Generally
distributed.

imberbis Blyth

Arambourg, 1947a

L. Pleistocene.
Abyssinia.

Tragelaphus Blainville, 1816

(Including *Limnotragus* Sclater & Thomas, 1900)

angasii Gray

Zealley, 1916

Pleistocene.
Rhodesia.

buxtoni Lydekker

Dietrich, 1942a, 1950

Pleistocene.
Tanganyika.

gratus P. L. Sclater

Joleaud, 1936c; Roman, 1934

Pleistocene.
French West
Africa.

†*nakuae* Arambourg

Arambourg, 1941, 1947a

L. Pleistocene.
Abyssinia.

scriptus (Pallas)

Dietrich, 1950; Schwarz, 1937

M. Pleistocene.
Tanganyika.

selousi W. Rothschild

Zealley, 1916

Pleistocene.
Rhodesia.

**spekei stromeri* Schwarz

Dietrich, 1950; Schwarz, 1932, 1937

M. Pleistocene.
Tanganyika.

Taurotragus Wagner, 1855

(= *Oreas* Desmarest, 1822, *non* Hübner, 1806 = *Oreonagor* Pomel, 1895, in part)

**oryx* (Pallas) = *canna* H. Smith

Arambourg, 1931c, 1932b; Broom, 1913a, Chubb, 1909 (1908); Clark, 1942; Cooke, 1941a, 1949b; Cooke & Wells, 1946; Dietrich, 1939, 1950; Dreyer & Lyle, 1931; Hopwood, 1928a; Joleaud, 1910, 1936b; Kent, 1942b; Mennell & Chubb, 1907; Romer, 1928; Schwarz, 1937; Wells & Cooke, 1942

Pleistocene.
Generally
distributed.

†*oryx pachyceros* Schwarz

Dietrich, 1939, 1950; Schwarz, 1937

M. Pleistocene.
Tanganyika.

derbianus (Gray)

Arambourg, 1938a, 1938b; Joleaud, 1936–37 (1935)

Pleistocene.
Barbary.

†*derbianus brevicornis* (Pomel)

Joleaud, 1910, 1936–37 (1935); Pomel, 1895

Pleistocene.
Algeria.

- †**derbianus maroccanus** Arambourg
Arambourg, 1938a
Pleistocene.
Morocco.
- †**derbianus procanna** (Pomel)
Arambourg, 1947a; Campardou, 1917; Joleaud, 1910, 1936–37 (1935); Pomel, 1895
Pleistocene.
Barbary,
Abyssinia.
- †**ournouëri** (Ph. Thomas)
[See also *Adenota tournouëri* (Ph. Thomas): both species are contained in *Antilope tournouëri* Ph. Thomas, 1884a] Dalloni, 1940; Joleaud, 1910, 1936–37 (1935); Savornin, 1920; Thomas, 1884a, 1884c.
Pleistocene.
Algeria.
- †**Simatherium** Dietrich, 1941
- ***kohllarseni** Dietrich
Dietrich, 1941, 1942a, 1950
L. Pleistocene.
Tanganyika.
- †**Aeotragus** Dietrich, 1950
- garussi** Dietrich
Dietrich, 1950
L. Pleistocene.
Tanganyika.
- Bos** Linnaeus, 1758
- ***taurus** Linnaeus
Arambourg, Boule etc., 1934; Barone, 1944; Clark, 1942; Débruge & Mercier, 1914 (1913); Doumergue, 1913; Ennouchi, 1949e; Gobert & Vaufrey, 1932; Howe & Movius, 1947; Joleaud, 1918 (1916); Romer, 1928; Thomas, 1877
Pleistocene.
Barbary.
- taurus africanus** Auctorum
Barone, 1944
Pleistocene.
Algeria.
- taurus ibericus** Sanson
Arambourg, 1938a; Arambourg, Boule, etc., 1934; Barone, 1944; Campardou, 1917; Débruge & Mercier, 1914 (1913); Doumergue, 1907, 1913, 1925, 1926b; Ennouchi, 1949e; Flamand, 1902 (1901); Gobert & Vaufrey, 1932; Joleaud, 1918 (1916), 1918b; Marchand, 1934b, 1935; Pomel, 1894a, 1894d; Romer, 1928; Vaufrey, 1940
Pleistocene.
Barbary.
- atlanticus** Blyth
Pallary & Tommasini, 1892 (1891)
U. Pleistocene.
Algeria.
- †**brachyceros** Auctorum
Gaillard, 1934; Joleaud, 1918b, 1936c; Roman, 1935 (1934)
Pleistocene.
Barbary,
Egypt.
- †**curvidens** Pomel
Doumergue & Poirier, 1894; Pomel, 1894a
Pleistocene.
Algeria.
- †**opisthonomus** Pomel
Balout, 1942; Barbin, 1910; Bettini, 1941; Boule, 1900a; Campardou, 1917; Débruge, 1903 (1902); Depéret, Passemard & Rochette, 1928; Doumergue, 1907, 1910, 1919, 1925, 1926b, 1927, 1934, 1935; Doumergue & Poirier, 1894; Duerst, 1900; Ficheur & Brives, 1900; Flamand, 1902 (1901); Marchand, 1932; Pomel, 1894a, 1894d; Vuillemot, 1937
Pleistocene.
Barbary.

†**primigenius** Bojanus

Arambourg, 1929*a*, 1931*a*, 1931*c*, 1932*b*, 1933 (1931), 1935*a*, 1938*a*, 1938*b*; Arambourg, Boule, etc., 1934; Boule, 1900*a*; Débruge & Mercier, 1914 (1913); Devillers, 1948; Doumergue, 1893 (1892), 1913; Duerst, 1900; Ennouchi, 1948*a*, 1949*c*, 1949*d*, 1949*e*; Gaillard, 1934; Gervais, 1849*d*, 1850 (1849)*a*, 1859; Howe & Movius, 1947; Joleaud, 1918*b*; Maw, 1876; Marchand, 1932; Mercier & Débruge, 1913; Niçaise, 1870*a*; Petrocchi, 1941*b*; Romer, 1928; Ruhlmann, 1936; Thomas, 1879*a*, 1881, 1884*a*, 1884*d*, 1886; Vaufrey, 1940

Pleistocene.

Barbary,
Egypt.**primigenius hahni** Hilzheimer

Bettini, 1941

primigenius mauritanicus Ph. Thomas

Boule, 1900*a*; Doumergue, 1893 (1892); Duerst, 1900; Joleaud, 1918*b*; Romer, 1928; Thomas, 1881, 1884*a*, 1884*d*, 1886

Pleistocene.

Algeria.

†**Homoioceras** Bate, 1949

(Including *Bubalus* Auctorum and *Buffelus* Rüttimeyer, 1867, both in part)

***singae** Bate

Bate, 1949

Pleistocene.

Sudan.

antiquus (Duvernoy)

Arambourg, 1931*c*, 1932*b*, 1935*a*, 1938*b*; Boule, 1900*a*; Bourcart, 1933*a*; Campardou, 1917; Dalloni, 1940; Dietrich, 1950; Doumergue, 1934; Doumergue & Poirier, 1894; Duerst, 1900; Duvernoy, 1851; Ennouchi, 1948*a*; Estaunié, 1941; Ficheur & Brives, 1900; Flamand, 1902 (1901); Gaudry, 1887; Gervais, 1859, 1867–69; Joleaud, 1910, 1918 (1916), 1918*b*, 1936 (1933), 1936*b*; Lönnberg, 1933; Nilsson, 1932; Pallary, 1887*a*; Pomel, 1886 (1885)*c*, 1888*a*, 1888*b*, 1890*b*, 1893*a*, 1893*b*, 1894*d*; Romer, 1928; Ruhlmann, 1936; Rüttimeyer, 1877, 1878; Thomas, 1875*b*, 1876, 1879*a*, 1881, 1884*a*, 1884*c*, 1884*d*, 1886; Vaufrey, 1940

Pleistocene.

Barbary.

baini (Seeley)

Broom, 1913*a*; Cooke, 1948*a*, 1949*b*; Dreyer & Lyle, 1931; Lönnberg, 1933; Nilsson, 1932; Peringuey, 1907; Seeley, 1891; Shapiro, 1943

Pleistocene.

South Africa.

nilssoni (Lönnberg)

Lönnberg, 1933; Nilsson, 1932, 1945

Pleistocene.

Kenya.

Syncerus Hodgson, 1847

(Includes *Bubalus* Auctorum, *Buffelus* Rüttimeyer, 1867, both in part; also *Bathyleptodon* Lönnberg, 1937)

†**aberrans** (Lönnberg)

Lönnberg, 1937

U. Pleistocene.

Kenya.

†**andersoni** (Scott) = *caffer* Sparrman?

Scott, 1907

Pleistocene.

South Africa.

caffer (Sparrman)

Cooke, 1941*a*, 1948*a*, 1949*b*; Dietrich, 1939, 1950; Hopwood, 1928*a*; Howe & Movius, 1947; Zealley, 1916

Pleistocene.

Generally
distributed.

- †**caffer makapaani** (Broom)
Broom, 1937d
†**vignardi** (Gaillard)
Gaillard, 1934
†**Bularchus** Hopwood, 1936
***arok** Hopwood
Dietrich, 1950; Hopwood, 1936a; Kent, 1942b
Pleistocene.
South Africa.
Pleistocene.
Egypt.
M. Pleistocene.
Tanganyika.

Sub-Family *Cephalophinae*

Cephalophus H. Smith, 1827

- †**leporina** (Pomel)
Doumergue, 1907; Joleaud, 1910, 1918 (1917); Pomel, 1895;
Savornin, 1920
†**parvus** Broom
Broom, 1930, 1934
†**preeminens** (Pomel)
Pomel, 1895
Pleistocene.
Algeria.
Pleistocene.
South Africa.
Pleistocene.
Algeria.
Philantomba Blyth, 1840
monticola (Gray)
Dietrich, 1950; Schwarz, 1937
M. Pleistocene.
Tanganyika.

Sylvicapra Ogilby, 1837

(= *Grimmia* Laurillard, 1842 = *Cephalophus*
Auctorum, in part)

- ***grimmia** (Linnaeus)
Cooke, 1949b; Cooke & Wells, 1946; Wells & Cooke, 1942;
Zealley, 1916
Pleistocene.
Rhodesia,
South Africa.

Sub-Family *Hippotraginae*

Kobus A. Smith, 1840

(= *Cobus* Buckley, 1876)

- ***ellipsiprymnus** (Ogilby)
Cooke, 1939, 1948a; Dietrich, 1939, 1950; Zealley, 1916
Pleistocene.
Tanganyika,
Rhodesia,
South Africa.
†**altidens** Cooke
Cooke, 1949b
Pleistocene.
South Africa.
defassa (Rüppell)
Joleaud, 1910, 1936-37 (1935)
defassa unctuosus (Laurillard) = †*Gazella atlantica* Bourguignat =
†*Egoceros lunata* Pomel = †*E. selenocera* Pomel
Bourguignat, 1870; Joleaud, 1910, 1936-37 (1935); Pomel,
1895; Romer, 1928; Ruhlmann, 1936
Pleistocene.
Algeria.
Pleistocene.
Algeria.
†**sigmoidalis** Arambourg
Arambourg, 1941, 1947a
L. Pleistocene.
Abyssinia.
†**venterae** Broom
Broom, 1913a; Dreyer & Lyle, 1931
Pleistocene.
South Africa.

Adenota Gray, 1847

(= *Oreonagor* Pomel, 1895, in part = *Kobus* Auctorum, in part)

***kob** (Erxleben)

Dietrich, 1939, 1950; Hopwood, 1939a

Pleistocene.

Tanganyika,
Uganda.

†**tournouëri** (Ph. Thomas) = *Antilope tournouëri* Ph. Thomas in part. See also *Taurotragus tournouëri* Joleaud, 1936–37 (1935); Thomas, 1884a

Pleistocene.

Algeria.

vardonii (Livingstone)

Zealley, 1916

Pleistocene.

Rhodesia.

Redunca H. Smith, 1827

(= *Cervicapra* Blainville, 1816, non Sparrman, 1780, = *Nagor* Laurillard, 1842 = *Oegoceros* Auctorum, in part)

***redunca** (Pallas)

Arambourg, 1938a; Dietrich, 1939, 1950; Joleaud, 1936–37 (1935); Romer, 1928

Pleistocene.

Barbary,
Tanganyika.

†**redunca maupasii** (Pomel)

Arambourg, 1938a; Doumergue, 1893 (1892), 1927; Doumergue & Poirier, 1894; Ennouchi, 1948a; Flamand, 1902 (1901); Joleaud, 1910, 1936–37 (1935); Pomel, 1892d, 1895; Romer, 1928; Ruhlmann, 1936

Pleistocene.

Algeria.

†**redunca troglodytorum** (Pomel)

Doumergue, 1927; Joleaud, 1910, 1936–37 (1935); Pomel, 1895

Pleistocene.

Algeria.

†**ancystrocera** Arambourg

Arambourg, 1947a

L. Pleistocene.

Abyssinia.

arundinum (Boddaert)

Zealley, 1916

Pleistocene.

Rhodesia.

Hippotragus Sundevall, 1844

(Including *Hippotragoides* Cooke, 1947)

***leucophaeus** (Pallas)

Dietrich, 1950; Schwarz, 1937

M. Pleistocene.

Tanganyika.

†**broomi** (Cooke)

Cooke, 1947b

Pleistocene.

South Africa.

†**cordieri** (Christol)

Andrews, 1902b

Pliocene.

Egypt.

equinus (Desmarest)

Arambourg, 1938a; Arambourg, Boule, etc., 1934; Clark, 1942; Dietrich, 1939, 1950; Doumergue, 1934; Joleaud, 1936b; Kent, 1942b; Zealley, 1916

Pleistocene.

Generally
distributed.

niger (Harris)

Cooke, 1947b, 1949b; Zealley, 1916

Pleistocene.

Rhodesia,
South Africa.

†**niro** Hopwood

Dietrich, 1950; Hopwood, 1936a

M. Pleistocene.

Tanganyika.

†**problematicus** Cooke

Cooke, 1947b

Pleistocene.

South Africa.

Oryx Blainville, 1816(Including *Aegoryx* Pocock, 1918)**gazella** Linnaeus = **oryx* (Pallas)

Arambourg, 1947a

L. Pleistocene.

Abyssinia.

algazel (Oken) = *leucoryx* Sundevall non Pallas = *tao* H. Smith
Campardou, 1917; Joleaud, 1910, 1918c, 1918d, 1936b;
Pomel, 1895; Romer, 1928

Pleistocene.

Algeria.

beisa (Rüppell)

Dietrich, 1939, 1950

M. Pleistocene.

Tanganyika.

Addax Rafinesque, 1815**nasomaculatus** (Blainville)

Balout, 1942

Pleistocene.

Algeria.

†**Parmularius** Hopwood, 1934***altidens** Hopwood

Dietrich, 1950; Hopwood, 1934

M. Pleistocene.

Tanganyika.

†**Praedamalis** Dietrich, 1950***deturi** Dietrich

Dietrich, 1950

L. Pleistocene.

Tanganyika.

Damaliscus Sclater & Thomas, 1894(= *Damalis* Gray, 1846, non H. Smith, 1827, =
Oegoceros Auctorum, in part)***pygargus** (Pallas)

Cooke, 1941a, 1949b; Wells & Cooke, 1942

Pleistocene.

South Africa.

albifrons (Burchell)Cooke, 1949b; Cooke & Wells, 1946; Dreyer & Lyle, 1931;
Shapiro, 1943; Wells & Cooke, 1942

Pleistocene.

South Africa.

†**angusticornis** Schwarz

Dietrich, 1950; Schwarz, 1937

M. Pleistocene.

Tanganyika.

lunatus (Burchell)

Cooke, 1949b; Zealley, 1916

Pleistocene.

Rhodesia,

South Africa.

Alcelaphus Blainville, 1815(= "*Bubalis* Frisch, 1775", = *Buselaphus* Reichenbach,
1845, = *Boselaphus* Auctorum)**buselaphus** (Pallas) = **bubalis* (Pallas) = †*ambiguus* Pomel =
boselaphus Trouessart = †*probubalis* Pomel = †*saldensis*
Pomel

Pleistocene.

Egypt,

Barbary.

Arambourg, 1931c, 1935a, 1938a, 1938b; Arambourg, Boule,
etc., 1934; Boule, 1900a; Bourcart, 1927; Campardou,
1917; Débruge, 1903 (1902), 1910 (1909); Débruge & Mer-
cier, 1914 (1913); Depéret, Passemard & Rochette, 1928;
Devillers, 1948; Doumergue, 1910, 1913, 1919, 1921a, 1923,
1925, 1926a, 1926b, 1927, 1934, 1935; Doumergue & Poirier,
1894; Ennouchi, 1948a, 1949c, 1949d, 1949e; Estaunié, 1941;
Ficheur & Brives, 1900; Flamand, 1902 (1901); Gaillard,

1934; Howe & Movius, 1947; Joleaud, 1933*h*, 1936*c*; Lecomtre, 1926; Marchand, 1932, 1934*a*, 1935; Mercier & Débruge, 1913; Pallary, 1887*b*; Pallary & Tommasini, 1892 (1891); Pomel, 1888*a*, 1894*c*; Roman, 1935 (1934); Romer, 1928; Ruhlmann, 1936; Thomas, 1877, 1884*a*, 1884*d*; Vaufrey, 1940; Vuillemot, 1937

caama (F. Cuvier)

Cooke, 1941*a*, 1949*b*; Cooke & Wells, 1946

†**helmei** (Lyle)

Dreyer & Lyle, 1931; van Hoepen, 1932*b*

†**priscus** (Broom)

Broom, 1909*a*

†**robustus** Cooke

Cooke, 1949*b*

Pleistocene.

South Africa.

Pleistocene.

South Africa.

Pleistocene.

South Africa.

Pleistocene.

South Africa.

Beatragus Heller, 1912

***hunteri** (Sclater)

Dietrich, 1950; Schwarz, 1937

M. Pleistocene.

Tanganyika.

Connochaetes Lichtenstein, 1814

gnou (Zimmermann) = **gnu* (Gmelin)

[The following papers probably refer to *Gorgon* spp.]

Arambourg, 1931*c*; Boule, 1900*a*; Cooke, 1949*b*; Joleaud, 1910, 1936*b*; Romer, 1928

Pleistocene.

Barbary,

South Africa.

†**antiquus** Broom

Broom, 1913*a*; Dreyer & Lyle, 1931

Pleistocene.

South Africa.

Gorgon Gray, 1850

(= *Rhynotragus* Reck, 1933. Here includes

†*Parestigorgon* Dietrich, 1950)

taurinus (Burchell) = **gorgon* (H. Smith)

Arambourg, 1938*a*, 1938*b*; Chubb, 1909 (1908); Clark, 1942; Cooke, 1949*b*; Dietrich, 1939, 1950; Ennouchi, 1948*a*, 1949*d*, 1949*e*; Hopwood, 1928*a*, 1936*c*; Kohl-Larsen, 1940; Mennell & Chubb, 1907; Neuville & Ruhlmann, 1941; Schwarz, 1937; Wells & Cooke, 1942

Pleistocene.

Generally distributed.

†**taurinus laticornutus** (van Hoepen)

van Hoepen, 1932*b*

Pleistocene.

South Africa.

†**taurinus major** (Dietrich)

Dietrich, 1950

U. Pleistocene?

Tanganyika.

†**taurinus prognus** Pomel

Arambourg, 1938*a*; Boule, 1900*a*; Ennouchi, 1948*a*, 1949*d*, 1949*e*; Ficheur & Brives, 1900; Flamand, 1902 (1901); Joleaud, 1910; Neuville & Ruhlmann, 1941; Pomel, 1894*c*

Pleistocene.

Barbary.

†**taurinus semiticus** (Reck)

Dietrich, 1950; Reck, 1933, 1935; Schwarz, 1937

M. Pleistocene.

Tanganyika.

†**gadjingeri** (Dietrich)

Dietrich, 1950

L. Pleistocene.

Tanganyika.

Sub-Family *Antilopinae***Oreotragus** A. Smith, 1834

oreotragus (Zimmermann) = **saltatrix* (Boddaert)
Hopwood, 1936c; Zealley, 1916

Pleistocene.
Rhodesia.

Nesotragus Düben, 1847

***moschatus** Düben
Dietrich, 1950; Schwarz, 1937

M. Pleistocene.
Tanganyika.

†**Praemadoqua** Dietrich, 1950

***avifluminis** Dietrich
Dietrich, 1950

L. Pleistocene.
Tanganyika.

Aepyceros Sundevall, 1847

***melampus** (Lichtenstein)
Arambourg, 1947a; Cooke, 1948a, 1949b; Cooke & Wells,
1946; Dietrich, 1950; Hopwood, 1936c; Zealley, 1916

Pleistocene.
Widely
distributed.

melampus suara (Matschie)
Dietrich, 1939

U. Pleistocene.
Tanganyika.

Gazella Blainville, 1816

(= *Dorcas* Gray, 1821)

***dorcas** (Linnaeus). = †*atlantica* (Ph. Thomas) = *corinna* (Pallas)
non (Cuvier) = †*kevella* (Pallas) = †*nodicornis* (Pomel) =
†*subgazella* (Pomel) = *thomasi* (Pomel)
Arambourg, 1938a; Arambourg, Boule, etc., 1934; Barone,
1944; Bourguignat, 1870; Bourjot, 1869b; Cabrera, 1928;
Campardou, 1917; Débruge, 1910 (1909); Débruge &
Mercier, 1914 (1913); Depéret, Passemard & Rochette, 1928;
Devillers, 1948; Doumergue, 1907, 1913, 1921a, 1923, 1926b,
1927, 1935; Doumergue & Poirier, 1894; Ennouchi, 1948a,
1949d, 1949e; Estaunié, 1941; Ficheur & Brives, 1900;
Gobert & Vaufrey, 1932; Howe & Movius, 1947; Joleaud,
1918 (1917), 1929, 1936c, 1936-37 (1935); Joleaud & Men-
chikoff, 1934; Pallary & Tommasini, 1892 (1891); Pilgrim
& Hopwood, 1928; Pomel, 1895; Romer, 1928; Ruhlmann,
1936; Thomas, 1884a, 1884c, 1884d

Pleistocene.
Barbary.

dorcas isabella Gray

Gaillard, 1934; Joleaud, 1918 (1917); Romer, 1928

Pleistocene.
Barbary,
Egypt.

dama (Pallas) = †*massaessilia* (Pomel) = †*crassicornis* (Pomel)
Arambourg, 1931c, 1932b; Dalloni, 1940; Débruge, 1910
(1909); Depéret, Passemard & Rochette, 1928; Ficheur &
Brives, 1900; Joleaud, 1918 (1917), 1929, 1936b; Lavauden,
1926; Pomel, 1895; Romer, 1928; Ruhlmann, 1936

Pleistocene.
Barbary.

gazella (Pallas) = †*setifensis* (Pomel) = †*subkevella* (Pomel)
Arambourg, 1949a; Barbin, 1910; Dalloni, 1940; Débruge,
1910 (1909); Dietrich, 1950; Flamand, 1902 (1901); Joleaud,
1918 (1917), 1929; Pomel, 1895; Savornin, 1920; Schwarz,
1937

Pleistocene.
Barbary.

- gazella cuvieri** (Ogilby)
Arambourg, 1931*a*, 1933 (1931), 1938*a*; Doumergue, 1923, 1926*b*, 1927, 1935; Ennouchi, 1948*a*; Howe & Movius, 1947; Joleaud, 1918 (1916), 1918 (1917), 1929; Lavauden, 1926; Marchand, 1935; Romer, 1928; Vuillemot, 1937
Pleistocene.
Barbary.
- †**gazella precursor** Schwarz
Dietrich, 1950; Schwarz, 1937
M. Pleistocene.
Tanganyika.
- granti** Brooke
Dietrich, 1939, 1950; Hopwood, 1936*c*; Joleaud, 1918 (1917); Romer, 1928; Schwarz, 1937
Pleistocene.
Barbary?
Tanganyika.
- †**helmoedi** van Hoepen
van Hoepen, 1932*b*
Pleistocene.
South Africa.
- †**hennigi** Dietrich
Dietrich, 1950
L. Pleistocene.
Tanganyika.
- †**janenschi** Dietrich
Dietrich, 1950
L. Pleistocene.
Tanganyika.
- †**kohllarseni** Dietrich
Dietrich, 1950
L. Pleistocene.
Tanganyika.
- †**praethomsoni** Arambourg
Arambourg, 1947*a*
L. Pleistocene.
Abyssinia.
- rufifrons** Gray = †*oranensis* (Pomel) = †*pallaryi* (Pomel)
Barbin, 1910; Doumergue, 1907, 1927, 1935; Joleaud, 1918 (1917), 1929; Howe & Movius, 1947; Pilgrim & Hopwood, 1928; Pomel, 1895; Romer, 1928
Pleistocene.
Algeria.
- rufifrons rufina** O. Thomas
Doumergue, 1927; Joleaud, 1918 (1917), 1929
Pleistocene.
Algeria.
- soemmerringii** (Cretzschmar)
Howe & Movius, 1947
U. Pleistocene.
Algeria.
- thomsoni** Günther
Dietrich, 1950; Hopwood, 1936*c*
Pleistocene.
Tanganyika.
- †**triquetricornis** (Pomel)
Ficheur & Brives, 1900; Joleaud, 1918 (1917); Pomel, 1895; Romer, 1928
Pleistocene.
Algeria.
- †**wellsi** Cooke
Cooke, 1949*b*
Pleistocene.
South Africa.
- †**Phenacotragus** Schwarz, 1937
(= *Adenota* Auctorum, in part)
- *recki** (Schwarz)
Dietrich, 1950; Kent, 1942*b*; Reck, 1933; Schwarz, 1932, 1937
M. Pleistocene.
Tanganyika.
- Antidorcas** Sundevall, 1847
- marsupialis** Zimmermann = **euchore* Forster
Cooke, 1941, 1949*b*; Wells & Cooke, 1942
Pleistocene.
South Africa.
- Sub-Family *Caprinae*
Capra Linnaeus, 1758
- *hircus** Linnaeus
Arambourg, 1938*a*; Campardou, 1917; Howe & Movius, 1947; Joleaud, 1918 (1916), 1933*d*; Marchand, 1935; Romer, 1928; Ruhlmann, 1936
Pleistocene.
Barbary.

- hircus africana** Sanson
Joleaud, 1918 (1916) Pleistocene.
Algeria.
- †**promaza** (Pomel)
Flamand, 1902 (1901); Joleaud, 1933*d*; Pomel, 1898 (1897) Pleistocene.
Algeria.
- pyrenaica hispanica** Schimper
Bourjot, 1869*b*; Pallary & Tommasini, 1892 (1891) Pleistocene.
Algeria.
- †**Numidocapra** Arambourg, 1949
- ***crassicornis** Arambourg
Arambourg, 1949*b* Pleistocene.
Algeria.
- †**Pultiphagonides** Hopwood, 1934
- ***africanus** Hopwood
Dietrich, 1950; Hopwood, 1934 M. Pleistocene.
Tanganyika.
- Pelorovis** Reck, 1925
- ***oldowayensis** Reck
Dietrich, 1950; Joleaud, 1933*d*; Reck, 1925, 1928 M. Pleistocene.
Tanganyika.
- †**Pelorocerus** van Hoepen, 1932
- ***helmei** (Lyle), ? = *elegans* van Hoepen, ? = *mirum* van Hoepen
Cooke, 1941*a*, 1948*a*, 1949*b*; Cooke & Wells, 1946; Dreyer & Lyle, 1931; van Hoepen, 1932*b*, 1947; Shapiro, 1943; Wells & Cooke, 1942 Pleistocene.
South Africa.
- broomi** Cooke
Cooke, 1949*b* Pleistocene.
South Africa.
- Ammotragus** Blyth, 1840
(= *Musimon* Bourguignat 1870, in part, *non* Pallas, 1776, *nec* Gistel, 1848)
- lervia** (Pallas) = **tragelaphus* (G. Cuvier)
Arambourg, 1927, 1929*a*, 1931*a*, 1933 (1931), 1938*a*; Arambourg, Boule, etc., 1934; Barone, 1944; Bourguignat, 1870; Campardou, 1917; Débruge & Mercier, 1914 (1913); Doumergue, 1913, 1923, 1926*b*, 1927, 1935; Doumergue & Poirier, 1894; Flamand, 1902 (1901); Howe & Movius, 1947; Joleaud, 1918 (1916), 1927*b*, 1928*b*; Marchand, 1935; Romer, 1928; Thomas, 1884*a*, 1884*d*; Vuillemot, 1937 Pleistocene.
Barbary.
- †**lervia palaeotragus** (Pomel)
Doumergue, 1934; Pomel, 1898 (1897) Pleistocene.
Algeria.
- Ovis** Linnaeus, 1758
(= *Musimon* Pallas, 1776, also part of *Musimon* Bourguignat, 1870)
- ***aries** Linnaeus
Arambourg, 1938*a*; Campardou, 1917; Howe & Movius, 1947; Joleaud, 1933*d*; Romer, 1928; Thomas, 1884*a*, 1884*d* Pleistocene.
Barbary.
- aries africanus** Sanson
Doumergue, 1907; Flamand, 1902 (1901); Joleaud, 1933*d*; Marchand, 1935; Pomel, 1898 (1897); Romer, 1928 Pleistocene.
Barbary.
- musimon** (Pallas) = †*corsicus* Bourguignat = †*faidherbi* Bourguignat = †*lartetianus* Bourguignat = †*rouvieri* Bourguignat
Bourguignat, 1870 Pleistocene.
Algeria.

BOVIDAE OF UNCERTAIN POSITION

- | | | |
|--|--|--------------------------------|
| | † Megalotragus van Hoepen, 1932 | Pleistocene.
South Africa. |
| * euornatus van Hoepen
van Hoepen, 1932b | | |
| | † Menelikia Arambourg, 1941 | L. Pleistocene.
Abyssinia. |
| * lyrocera Arambourg
Arambourg, 1941, 1947a, 1948b | | |
| | † Palaeotragiscus Broom, 1930 | Pleistocene.
South Africa. |
| * longiceps Broom
Broom, 1930, 1934 | | |
| | † Propalaeoryx Stromer, 1926 | L. Miocene.
S.W. Africa. |
| * austroafricanus Stromer
Stromer, 1924 (1923), 1926 | | |
| | † Thaleroceros Reck, 1935 | M. Pleistocene.
Tanganyika. |
| * radiciformis Reck
Dietrich, 1950; Reck, 1933, 1935, 1937 | | |

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- abeli*, *Eotherium*. Sickenberg, 1931
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Addax. Joleaud, 1918*c*
ado, *Cercocebus*. Hopwood, 1936*a*; Kent, 1941*b*
adustus, *Canis*. Zealley, 1916
adustus, *Thos*. Clark, 1942; Hopwood, 1931*c*
aegyptiacum, *Eotherium*. Abel, 1904, 1914;
 Andrews, 1901*c*, 1906; Edinger, 1939; Owen,
 1875; Sickenberg, 1931; Weber, 1927-1928
aegyptiacum, *Rhagatherium*. Andrews, 1906;
 Schmidt, 1913
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 gue & Poirier, 1894; Estaunié, 1941
aeliani, *Phacochoerus*. Cooke, 1949*a*
Aepyceros. Arambourg, 1948*b*; Dietrich, 1939;
 Hopwood, 1926*b*
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aethiopicus, *Orycteropus*. Dietrich, 1939, 1942*a*;
 Hopwood, 1931*c*
aethiopicus, *Phacochoerus*. Arambourg, 1932*b*;
 Broom, 1913*a*; Chubb, 1909 (1908); Cooke,
 1939, 1941*a*, 1948*a*, 1949*a*, 1949*b*; Dietrich,
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 1942; Mennell & Chubb, 1907; Pomel, 1894*d*;
 Romer, 1928; Ruhlmann, 1936; Shapiro,
 1943; Shaw, 1939*b*; Wells & Cooke, 1942;
 Zealley, 1916
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 Adloff, 1932; Arambourg, 1947*c*; Ashton &
 Zuckerman, 1950*b*; Bennejeant, 1936; Broom,
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- africanus*, *Phacochoerus*. Arambourg, 1938a, 1938b, 1943a, 1947a, 1948b; Cooke, 1949a, 1949b; Cooke & Wells, 1946; Dietrich, 1942a; Ennouchi, 1948a; van Hoepen & van Hoepen, 1932; Hopwood, 1931c; Joleaud, 1933g, 1936b, 1936c; Joleaud & Menchikoff, 1934; Shaw, 1939b
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- Alcelaphus*. Anderson, 1932; Arambourg, 1948b, 1949a; Barbin, 1910; Bourcart, 1933b
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- algericus*, *Cervus*. Arambourg, 1931c, 1932b, 1938a, 1938b; Arambourg, Boule, etc., 1934; Joleaud, 1914c, 1916 (1915), 1926b, 1935a; Lydekker, 1890; Romer, 1928
- algericus*, *Megaceroides*. Dalloni, 1940; Joleaud, 1916 (1915), 1930; Romer, 1928
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- algius*, *Aethechinus*. Cabrera, 1928a, Howe & Movius, 1947
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- ambiguum*, *Hipparion*. Dalloni, 1940; Pomel, 1897d; Savornin, 1920
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- amphibius*, *Hippopotamus*. Anthony, 1946; Arambourg, 1931c, 1944a, 1935a, 1938a, 1938b, 1944, 1948 (1947), 1948b, 1949a; Boule, 1900a; Bourcart, 1933b; Broom, 1913a; Cooke, 1939, 1949a, 1949b; Cooke & Wells, 1946; Dalloni, 1940; Devillers, 1948; Dietrich, 1926, 1939; Dreyer & Lyle, 1931; Ennouchi, 1948a, 1949c; Falconer, 1864, 1865; Fraas, 1907a; Gaillard, 1934; Haughton, 1922 (1921); Hopwood, 1926a, 1926b, 1931c; Howe & Movius, 1947; Joleaud, 1910, 1923a, 1934a, 1936b, 1936c; Joleaud & Lombard, 1933; Joleaud & Menchikoff, 1934; Neuville & Ruhlmann, 1941; Pomel, 1890b; Reck & Dietrich, 1923; Reck & Kohl-Larsen, 1936; Roman, 1934, 1935 (1934); Romer, 1928; Solignac, 1927; Thomas, 1884a, 1884c, 1884d; Wells & Cooke, 1942; Zealley, 1916
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- andersoni*, *Bubalus*. Scott, 1907
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- andrewsi*, *Brachyodus*. Schmidt, 1913
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- annectens*, *Hippopotamus*. Falconer, 1865; Joleaud, 1923a; Morton, 1849; Pomel, 1896d
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- anthus*, *Canis*. Arambourg, 1932b, 1938a, 1938b; Arambourg, Boule, etc., 1934; Ennouchi, 1948a; Romer, 1928; Ruhlmann, 1936
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- antiquus*, *Buffelus*. Joleaud, 1918 (1916), 1918b, 1936b; Romer, 1928
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- antiquus*, *Dinoitherium*. Arambourg & Jeannel, 1933
- antiquus*, *Elephantulus*. Broom, 1948a
- antiquus*, *Elephas*. Arambourg, 1942, 1943 (1942); Bourcart, 1927, 1933b; Dietrich, 1916, 1925; Hopwood, 1926a; Joleaud, 1914a, 1936c; Kent, 1941b, 1942b; Leakey, Hopwood & Reck, 1931; Lecointre, 1926; Osborn, 1928; Pomel, 1896a; Ramsay & Geikie, 1878; Reck, 1914b, 1922 (1921); Thomas, 1884a; Vaufrey, 1947
- antiqua*, *Felis*. Pomel, 1897 (1896)b
- antiqua*, *Loxodonta*. Osborn, 1928
- antiquus*, *Palaeoloxodon*. Hopwood, 1936a; MacInnes, 1942
- antiquus*, *Papio*. Haughton, 1925
- antiquus*, *Parapapio*. Broom, 1948a
- antiquus*, *Phacochoerus*. Broom, 1948a
- antiquus*, *Proamblysomus*. Broom, 1941a, 1948a
- antiqua*, *Procavia*. Broom, 1930, 1934, 1948a
- antiquum*, *Saghatherium*. Andrews, 1906; Andrews & Beadnell, 1902; Hahn, 1934; Matsumoto, 1926; Osborn, 1906; Schlosser, 1910, 1911
- antiquus*, *Thos*. Broom, 1937d, 1939d, 1948a
- aphanistus*, *Machaerodus*. Stromer, 1913
- Apterodon* sp. Schlosser, 1911
- arboreus*, *Dendrohyrax*. Hahn, 1934
- Archaeosiren*. Blanckenhorn, 1921
- Archidiskodon*. Osborn, 1934a
- Archidiskodon* sp. Cooke, 1939; Kent, 1942b
- archidiskodontoides*, *Loxodonta*. Cooke, 1947a, 1949b
- archidiskodontoides*, *Palaeoloxodon*. Osborn, 1934a, 1942
- archidiskodontoides*, *Pilgrimia*. Haughton, 1932a
- arctos*, *Ursus*. Arambourg, 1927, 1931a, 1932a, 1933 (1931), 1933c, 1938a; Arambourg, Boule, etc., 1934; Barone, 1944; Depéret, Passemard & Rochette, 1928
- aries*, *Ovis*. Arambourg, 1938a; Campardou, 1917; Howe & Movius, 1947; Joleaud, 1933d; Romer, 1928; Thomas, 1884a, 1884d
- arkelli*, *Thryonomys*. Bate, 1947
- arok*, *Bularchus*. Dietrich, 1950; Hopwood, 1936a; Kent, 1942b
- Arsinoitherium*. Andrews, 1904a, 1904b; Gregory, 1920; Schlosser, 1911
- Arsinoitherium* sp. Osborn, 1908
- arundinum*, *Cervicapra*. Zealley, 1916
- arvernensis*, *Anancus*. Ennouchi, 1949a
- arvernensis*, *Mastodon*. Choubert & Ennouchi, 1946; Depéret, Lavauden & Solignac, 1925; Gervais, 1849b; Solignac, 1927
- Arvicanthis*. Hopwood, 1928a

- Asinus*. Van Hoepen, 1940
Asinus sp. Pallary & Tommasini, 1892 (1891)
asinus, *Equus*. Boule, 1900 (1899); Doumergue, 1926b, 1927, 1934, 1935; Doumergue & Poirier, 1894; Estaunié, 1941; Ficheur & Brives, 1900; Gaillard, 1934; Howe & Movius, 1947; Marchand, 1934a; Petrocchi, 1941b; Romer, 1928; Thomas, 1884a, 1884d; Vaufray, 1940
atavus, *Protocetus*. Abel, 1905a, 1905b, 1914; Fraas, 1904a; Gregory, 1920; Kellogg, 1928, 1936; Weber, 1927-1928
atlanticus, *Bos*. Pallary & Tommasini, 1892 (1891)
atlantica, *Canis vulpes*. Gobert & Vaufray, 1932
atlanticus, *Cynocephalus*. Joleaud, 1910; Romer, 1928; Thomas, 1884a
atlanticus, *Elephas*. Arambourg, 1938a, 1938b, 1948b; Boule, 1900a; Dalloni, 1940; Depéret & Mayet, 1923; Doumergue, 1922; Ennouchi, 1948a, 1949b, 1949c, 1950b; Joleaud, 1936b; Pallary, 1887a, 1887b; Pomel, 1879, 1886 (1885)a, 1886 (1885)b, 1886 (1885)c, 1888a, 1888b, 1894d, 1896a; Romer, 1928; Ruhlmann, 1936; Solignac, 1927; Thomas, 1884a, 1884d; Tilho & Arambourg, 1938; Tommasini, 1886
atlanticus, *Elephas (Loxodonta)*. Arambourg, 1948b
atlanticus, *Elephas meridionalis*. Joleaud, 1910, 1914a
atlanticus, *Equus asinus*. Boule, 1900 (1899); Thomas, 1884a, 1884d
atlantica, *Gazella*. Arambourg, 1938a; Barone, 1944; Bourguignat, 1870; Campardou, 1917; Débruge, 1910 (1909); Doumergue, 1927; Ennouchi, 1948a, 1949e; Estaunié, 1941; Joleaud, 1918 (1917), 1929, 1936-37 (1935); Pilgrim & Hopwood, 1928; Thomas, 1884a, 1884c
atlanticus, *Palaeoloxodon*. Osborn, 1942
atlanticus, *Vulpes*. Arambourg, 1931a, 1933 (1931), 1938a, 1938b; Bourguignat, 1870; Ruhlmann, 1936
atlanticus, *Vulpes vulpes*. Arambourg, 1932b; Arambourg, Boule, etc., 1934; Débruge & Mercier, 1914 (1913); Doumergue, 1913; Howe & Movius, 1947; Romer, 1928
atrox, *Canis*. Broom, 1948a
atrox, *Prozeuglodon*. Andrews, 1906, 1908b, 1923b; Gregory, 1920; Kellogg, 1928, 1936; Stromer, 1908b
aureus, *Canis*. Barone, 1944; Campardou, 1917; Depéret, Passemard & Rochette, 1928; Doumergue & Poirier, 1894; Flamand, 1902 (1901); Marchand, 1932; Pomel, 1897 (1896)b; Romer, 1928
aureus, *Lupulus*. Bourguignat, 1870
aureus, *Thos*. Howe & Movius, 1947
Australopithecus. Abel, 1928a; Arambourg, 1948b; Boule, 1925b, 1925c; Broom, 1929, 1936c, 1937a, 1937d, 1938c; Clark, Le Gros, 1947b; Dart, 1926, 1940, 1948f, 1948g, 1949f, 1949g; Gregory, 1930; Jeffreys, 1948; Keith, 1925b; von Koenigswald, 1939; Romer, 1930; Schepers, 1948; Schwarz, 1936; Sera, 1948; Sollas, 1925, 1926; Vallois, 1935; Wells, 1940
austroafricanus, *Propalaeoryx*. Stromer, 1924 (1923), 1926
avifluminis, *Praemadoqua*. Dietrich, 1950
baini, *Bubalus*. Broom, 1913a; Cooke, 1948a, 1949b; Dreyer & Lyle, 1931; Lönnberg, 1933; Nilsson, 1932, 1945; Peringuey, 1907; Seeley, 1891; Shapiro, 1943
barbarus, *Bramus*. Joleaud, 1910; Pomel, 1892a
barbarus, *Cervus*. Campardou, 1917; Joleaud, 1912b, 1913 (1912)
barbarus, *Cervus elaphus*. Joleaud, 1910, 1926b, 1935a; Romer, 1928
barbarus, *Phacochoerus*. Joleaud, 1910, 1933g; Pomel, 1897b
barbarus, *Sus*. Boule, 1900a; Doumergue, 1907; Flamand, 1902 (1901); Pomel, 1897b
barbarus, *Sus scrofa*. Joleaud, 1910, 1933g
barlowi, *Meganthereon*. Broom, 1937b, 1939d
barlowi, *Mystromys hausleitneri*. Broom, 1948a
barroisi, *Palaeomastodon*. Pontier, 1907
Barypoda. Andrews, 1904b
Barytherium. Andrews, 1901c, 1901d, 1904b
beadnelli, *Metaphiomys*. Osborn, 1908; Schlosser, 1911
beadnelli, *Palaeomastodon*. Abel, 1914; Andrews, 1901a, 1901b, 1903a, 1904c, 1905, 1906; Matsumoto, 1924; Osborn, 1936; Pontier, 1910 (1909); Weber, 1927-1928
Beatragus. Dietrich, 1939
beetzi, *Protypotheroides*. Stromer, 1922 (1921), 1924 (1923), 1926
beisa, *Oryx*. Dietrich, 1939, 1950
berberorum, *Felis caracal*. Romer, 1928
bicornis, *Atelodus*. Breuning, 1924

- bicornis*, *Diceros*. Cooke, 1949b, 1950; Dietrich, 1939, 1942b, 1945; Gregory, 1920; Hopwood, 1931c, 1939a, 1939b; Kent, 1942b; Reck & Kohl-Larsen, 1936
- bicornis*, *Rhinoceros*. Hopwood, 1939b; Joleaud, 1910
- blacki*, *Gigantopithecus*. Ashton & Zuckerman, 1950b
- bleyenberghi*, *Felis leo*. Lönnberg, 1937
- böhmi*, *Equus burchelli*. Hopwood, 1928a
- böhmi*, *Equus quagga*. Dietrich, 1939, 1942a
- borsoni*, *Mastodon*. Arambourg, 1949a; Dalloni, 1940; Joleaud, 1910; Pomel, 1896a; Savornin, 1920
- borsoni*, *Zygolophodon*. Arambourg, 1948b
- Bos*. Arambourg, 1949a; Bourcart, 1933b; Doumergue, 1893, 1925; Gervais, 1867-1869; Hopwood, 1926a, 1926b; Joleaud, 1933h; Pallary, 1887b; Pomel, 1886 (1885)c; Royer, 1927; Thomas, 1877
- Bos* sp. Arambourg, 1949a; Bourjot, 1869c; Doumergue, 1934; Hopwood, 1931c; Joleaud, 1933h, 1934a, 1936c; Pallary & Tommasini, 1892 (1891); Pomel, 1888a, 1888b; Roman, 1934; Royer, 1927; Savornin, 1920; Zealley, 1916
- Boselaphus*. Hopwood, 1926b
- boselaphus*, *Alcelaphus*. Howe & Movius, 1947; Mercier & Débruge, 1913
- boselaphus*, *Bubalis*. Arambourg, 1931c, 1935a, 1938a, 1938b; Arambourg, Boule, etc., 1934; Débruge & Mercier, 1914 (1913); Doumergue, 1913; Joleaud, 1936c; Marchand, 1932, 1935; Romer, 1928; Ruhlmann, 1936
- boselaphus*, *Bubalus*. See *boselaphus*, *Bubalis*
- bozasi*, *Deinotherium*. Arambourg, 1934b, 1935 (1934), 1947a, 1948b; Hopwood, 1936a; Joleaud, 1928a; Kent, 1941b; MacInnes, 1942
- bozasi*, *Deinotherium giganteum*. Dietrich, 1942a
- bozasi*, *Dinotherium*. See *bozasi*, *Deinotherium*
- brachycephalus*, *Hyaenodon*. Osborn, 1909a
- brachyceros*, *Bos*. Gaillard, 1934; Joleaud, 1918b, 1936c; Roman, 1935 (1934)
- brachyceros*, *Syncerus*. Arambourg, 1947a
- brachygnathus*, *Hyaenodon*. Osborn, 1909
- Brachyodus* sp. Arambourg, 1933a, 1933b
- brachyspondylus*, *Zeuglodon*. Kellogg, 1936; Stromer, 1908b
- Bradytherium*. See *Barytherium*
- Bramus*. Pomel, 1892a
- Branatherulum*. Dietrich, 1927; Simpson, 1928
- brevicornis*, *Antilope*. Pomel, 1895
- brevicornis*, *Oreas*. Joleaud, 1910, 1936 (1935)
- brevicornis*, *Taurotragus derbyi*. Joleaud, 1936-37 (1935)
- brevirostre*, *Mastodon*. Gervais, 1849b
- broomi*, *Archidiskodon*. Arambourg, 1948b; Cooke & Wells, 1946; Dart, 1929a; Osborn, 1928, 1934a, 1942
- broomi*, *Equus*. Cooke, 1950
- broomi*, *Hippotragoides*. Cooke, 1947b
- broomi*, *Mammuthus*. Cooke, 1947a, 1949b
- broomi*, *Notochoerus*. Cooke, 1949a; Shaw & Cooke, 1941
- broomi*, *Parapapio*. Broom, 1940a; Dart, 1949g; Jones, 1937 (1936); Kitching, Wells & Westphal, 1948; Mollett, 1947
- broomi*, *Peloroceras*. Cooke, 1949b
- brumpti*, *Dinopithecus*. Arambourg, 1947a
- brunnea*, *Hyaena*. Clark, 1942; Dreyer & Lyle, 1931; Pohle, 1928
- Bubalis*. Clark, 1942
- bubalis*, *Alcelaphus*. Campardou, 1917; Devillers, 1948; Doumergue, 1919, 1921a, 1925, 1926a, 1927, 1935; Doumergue & Poirier, 1894; Ennouchi, 1948a, 1949c, 1949d, 1949e; Estaunié, 1941; Joleaud, 1933h; Pallary & Tommasini, 1892 (1891); Thomas, 1884a, 1884d; Vaufrey, 1940
- bubalis*, *Antilope*. Doumergue, 1910, 1919; Doumergue & Poirier, 1894; Pallary, 1887b; Pomel, 1888a; Thomas, 1877
- bubalis*, *Boselaphus*. Doumergue, 1923, 1926b, 1927; Flamand, 1902 (1901); Vuillemot, 1937
- bubalis*, *Buselaphus*. See *bubalis*, *Boselaphus*
- bubalis*, *Bubalis*. Marchand, 1934a
- Bubalus*. Arambourg, 1949a; Joleaud, 1933h
- Bubalus* sp. Arambourg, 1949a; Dietrich, 1937b, 1950
- bubalus*, *Bos*. Bourjot, 1869b
- Buffelus* sp. Reck & Kohl-Larsen, 1936
- Bunohyrax*. Schlosser, 1910, 1911
- Bunohyrax* sp. Schlosser, 1911
- burchelli*, *Equus*. Arambourg, 1931c, 1932b, 1935a, 1938a; Cooke, 1939, 1941a, 1943, 1948a, 1949b, 1950; Cooke & Wells, 1946; Doumergue, 1927; Gobert & Vaufrey, 1932; Grabham, 1920; Hopwood, 1928a; Howe & Movius, 1947; Joleaud, 1910, 1918 (1916); Romer, 1928; Shapiro, 1943; Vaufrey, 1940; Wells & Cooke, 1942; Zealley, 1916
- burchelli*, *Hippotigris*. Débruge, 1909 (1908)
- buselaphus*, *Bubalis*. Gaillard, 1934; Roman, 1935 (1934)
- buselaphus*, *Bubalus*. See *buselaphus*, *Bubalis*
- buxtoni*, *Tragelaphus*. Dietrich, 1942a, 1950

- caama*, *Alcelaphus*. Cooke, 1941a, 1949b; Cooke & Wells, 1946
- caballus*, *Equus*. Arambourg, 1938a; Bourguignat, 1870; Campardou, 1917; Doumergue, 1926b; Doumergue & Poirier, 1894; Flamand, 1902 (1901); Gaillard, 1934; Petrocchi, 1941b; Thomas, 1879a; Tommasini, 1886; Vaufrey, 1940
- cabrerai*, *Gazella dorcas*. Joleaud, 1929
- caffer*, *Bos*. Zealley, 1916;
- caffer*, *Bubalus*. Dietrich, 1939; Hopwood, 1928a
- caffer*, *Pedetes*. Zealley, 1916
- caffer*, *Syncerus*. Cooke, 1941a, 1948a, 1949b; Dietrich, 1950; Howe & Movius, 1947
- caffra*, *Felis*. Pohle, 1928
- calamophagus*, *Thryonomys*. Joleaud 1936c; Roman, 1934, 1935 (1934)
- Camelopardalis*. Flamand, 1902 (1901)
- camelopardalis*, *Giraffa*. Arambourg, 1947a, 1948 (1947), 1948b; Cooke & Wells, 1947; Dietrich, 1939, 1942a; Hopwood, 1928a; Howe & Movius, 1947; Joleaud, 1936b
- Camelopardus* sp. Doumergue, 1934
- Camelus*. Flamand, 1902 (1901)
- Camelus* sp. Arambourg & Arnould, 1950 (1949); Campardou, 1917; Doumergue, 1934; Joleaud, 1933h; Stromer, 1907b
- campestris*, *Raphicerus*. Hopwood, 1936c
- Canis*. Arambourg, 1949a; Gervais, 1859
- Canis* sp. Arambourg, 1949a; Broom, 1939d; Dietrich, 1942a; Ennouchi, 1948a, 1949e
- canna*, *Oreas*. Joleaud, 1910; Romer, 1928
- capensis*, *Aonyx*. Hopwood, 1931c
- capensis*, *Crocota spelaea*. Broom, 1939d
- capensis*, *Equus*. Broom, 1909b, 1913a; Broom & Le Riche, 1937; Cooke, 1939, 1941a, 1948a, 1949b, 1950; Cooke & Wells, 1946; Dreyer & Lyle, 1931; Haughton, 1932b; Shapiro, 1943; Wells & Cooke, 1942
- capensis*, *Giraffa*. Hopwood, 1936a; Kent, 1942b
- capensis*, *Lutra*. Stromer, 1920
- capensis*, *Notochoerus*. Arambourg, 1943a, 1947a, 1948b; Broom, 1925c; Cooke, 1949a, 1949b; Shaw, 1938, 1939b
- capensis*, *Procavia*. Hahn, 1934; Zealley, 1916
- capensis*, *Telanthropus*. Broom & Robinson, 1949d, 1950a; Straus, 1950
- capensis*, *Xerus*. Zealley, 1916
- Capra* sp. Gobert & Vaufrey, 1932; Petrocchi, 1941b
- caracal*, *Felis*. Doumergue, 1923; Doumergue & Poirier, 1894; Romer, 1928
- caracal*, *Lynx*. Dietrich, 1942a
- catus*, *Felis*. Flamand, 1902 (1901)
- cauui*, *Calogale*. Dreyer & Lyle, 1931
- cawoodi*, *Equus*. Broom, 1928a; Cooke, 1939, 1949b, 1950; Dreyer & Lyle, 1931; Haughton, 1932b; van Hoepen, 1930a
- Cephalophus*. Clark, 1942
- Cephalophus* sp. Dietrich, 1939, 1950; Dreyer & Lyle, 1931
- Cercocebus* sp. Dietrich, 1939; Reck & Kohl-Larsen, 1936
- Cercopithecus*. Topinard, 1893
- Cercopithecus* sp. Clark, 1942
- cervia*, *Ammotragus*. See *lervia*, *Ammotragus*
- Cervicapra*. Clark, 1942; Romer, 1928
- Cervicapra* sp. Reck & Kohl-Larsen, 1936
- Cervus*. Flamand, 1902 (1901); Roman, 1934
- Cervus* sp. Arambourg, 1938a; Ennouchi, 1948a; Joleaud, 1933h, 1936c; Petrocchi, 1941b; Pomel, 1893c
- Chalicotherium*. Andrews, 1923c
- chama*, *Cynalopex*. Wells & Cooke, 1942
- championi*, *Pliohyrax*. Arambourg, 1933b
- chapmanni*, *Equus*. Bourdelle, 1934
- chappuisi*, *Dorcatherium*. Arambourg, 1933b
- Choeromys* sp. Hopwood, 1931c
- Choeropithecus*. Hopwood, 1947c
- Choeropotamus*. Schweinfurth, 1886
- choeropotamus*, *Koiropotamus*. Kent, 1942b
- choiropotamus*, *Choiropotamus*. Hopwood, 1931c
- Chrysochloris*. Stromer, 1911
- cingulatum*, *Griquatherium*. Cooke & Wells, 1947; Haughton, 1922 (1921); Joleaud, 1937
- coelophrys*, *Achtiaria*. Joleaud, 1937; Suess, 1932
- cokei*, *Alcelaphus*. Hopwood, 1936c
- Colomys* sp. Dietrich, 1942a
- comatus*, *Papio*. Broom, 1941c
- compactus*, *Phacochoerus*. Cooke, 1948a, 1949a, 1949b; Cooke & Wells, 1946; Wells & Cooke, 1942
- compactus*, *Stylochoerus*. Arambourg, 1943a; Cooke, 1949a; van Hoepen & van Hoepen, 1932; Shaw, 1939b
- complectidens*, *Phacochoerus*. Cooke, 1949a; Leakey, 1942
- congolensis*, *Phacochoerus*. Van Straelen, 1924
- Connochaetes*. Devillers, 1948; Joleaud, 1936-37 (1935)
- Connochaetes* sp. Cooke, 1939, 1941a, 1948a, 1949b; Cooke & Wells, 1946; Dietrich, 1950; Howe & Movius, 1947; Reck & Kohl-Larsen, 1936; Shapiro, 1943

- cordieri*, *Hippotragus*. Andrews, 1902b
corinna, *Antilope*. Bourjot, 1869b; Thomas, 1884d
corinna, *Gazella*. Thomas, 1884a
cornelianus, *Eurygnathohippus*. Cooke, 1950; Houghton, 1932b; van Hoepen, 1930b
coronatus, *Parapapio*. Broom & Robinson, 1950f
corsicus, *Musimon*. Bourguignat, 1870
coucha, *Mus*. Zealley, 1916
coulombi, *Manatus*. Filhol, 1878
crassicornis, *Antilope*. Ficheur & Brives, 1900; Pomel, 1895
crassicornis, *Gazella*. Arambourg, 1931c, 1932b; Débruge, 1910 (1909); Depéret, Passemard & Rochette, 1928; Joleaud, 1918 (1917), 1929, 1936b; Lavauden, 1926; Ruhlmann, 1936
crassicornis, *Numidocapra*. Arambourg, 1949b
crassidens, *Felis*. Broom, 1948a
crassidens, *Paranthropus*. Broom, 1949b, 1950a; Broom & Robinson, 1949e, 1950a, 1950b, 1950c, 1950d, 1950e; Sauter, 1950.
crassidentatus, *Pachyhyrax*. Hahn, 1934; Matsumoto, 1926; Schlosser, 1910, 1911
crassum, *Hipparion*. Solignac, 1927
cristata, *Hystrix*. Arambourg, 1931a, 1931c, 1932b, 1933 (1931), 1938a, 1938b; Arambourg, Boule, etc., 1934; Barone, 1944; Bourguignat, 1870; Doumergue, 1923, 1926b; Doumergue & Poirier, 1894; Estaunié, 1941; Flamand, 1902 (1901); Gobert & Vaufrey, 1932; Howe & Movius, 1947; Pallary & Tommasini, 1892 (1891); Petrocchi, 1941b; Pomel, 1888a, 1888b, 1894d; Romer, 1928; Ruhlmann, 1936.
Crocidura. Hopwood, 1928a; Joleaud, 1927c; Romer, 1928
Crocidura sp. Broom, 1948a
crocuta, *Crocuta*. Cooke, 1949b; Dietrich, 1939, 1942a; Hopwood, 1928a, 1931c; Kent, 1942b; Shapiro, 1943; Wells & Cooke, 1942.
crocuta, *Crocotta*. See *crocuta*, *Crocuta*
crocuta, *Hyaena*. Arambourg, 1932b, 1938a, 1938b; Arambourg, Boule, etc., 1934; Campardou, 1917; Depéret, Passemard & Rochette, 1928; Doumergue, 1934; Gaillard, 1934; Gobert & Vaufrey, 1932; Joleaud, 1910; Reck & Kohl-Larsen, 1936; Romer, 1928; Ruhlmann, 1936; Stromer, 1911; Zealley, 1916
cromeriensis, *Elephas meridionalis*. Arambourg, 1938a
cuniculus, *Lepus*. Doumergue & Poirier, 1894
cuniculus, *Oryctolagus*. Gobert & Vaufrey, 1932; Howe & Movius, 1947; Joleaud, 1920b; Romer, 1928
curvidens, *Bos*. Doumergue & Poirier, 1894; Pomel, 1894a
cuvieri, *Dinotherium*. Brives, 1919
cuvieri, *Gazella*. Arambourg, 1931a, 1933 (1931), 1938a; Doumergue, 1923, 1925, 1926b, 1927, 1935; Ennouchi, 1948a; Howe & Movius, 1947; Joleaud, 1918 (1916), 1918 (1917), 1929; Lavauden, 1926; Marchand, 1935; Romer, 1928; Vuillemot, 1937
Cynocephalus. Topinard, 1893
cyrenae, *Microtus*. Bate, 1950
dama, *Cervus*. Joleaud, 1910, 1926b, 1935a; Romer, 1928
dama, *Dama*. Joleaud, 1912b
dama, *Gazella*. Joleaud, 1918 (1917), 1929; Lavauden, 1926; Romer, 1928; Ruhlmann, 1936
Damaliscus. Arambourg, 1935 (1934); Dietrich, 1939
Damaliscus sp. Arambourg, 1934b; Cooke, 1948a, 1949b; Dietrich, 1950; Fraas, 1907a; Zealley, 1916
darti, *Gypsorhynchus*. Broom, 1930, 1934, 1939b
darti, *Loxodonta*. Cooke, 1947a
darti, *Palaeoloxodon*. Cooke & Clark, 1939; Osborn, 1942
darti, *Papio*. Broom & Hughes, 1949; Broom & Jensen, 1946; Kitching, Wells & Westphal, 1948
dawsoni, *Eoanthropus*. Ashton & Zuckerman, 1950b; Schepers, 1946
debruyni, *Thallomys*. Broom, 1948a
defassa, *Kobus*. Joleaud, 1910, 1936-37 (1935)
Deinotherium. Joleaud, 1927a, 1932 (1931); Reck, 1932b; Wayland, 1932
Deinotherium sp. Kent, 1942b; Leakey, Hopwood & Reck, 1931
Dendrohyrax. Hahn, 1934
Dendromus sp. Dietrich, 1942a
depereti, *Masritherium*. Fourtau, 1920
derbyanus, *Taurotragus*. Arambourg, 1938a, 1938b; Joleaud, 1936-37 (1935)
derbyi, *Taurotragus*. Joleaud, 1936-37 (1935)
deturi, *Praedamalis*. Dietrich, 1950
dietrichi, *Notochoerus*. Cooke, 1949a; Hopwood, 1934; Kent, 1942b; Leakey, 1942; Vaufrey, 1947, 1948b
Dinopithecus. Arambourg, 1948b
Dinopithecus sp. Broom & Hughes, 1949

- Dinotherium*. See *Deinotherium*
diphycus, *Geniohyus*. Matsumoto, 1926
dissimilis, *Merycopotamus*. Boule, 1910c;
 Roman, 1931; Roman & Solignac, 1934
doederleini, *Myohyrax*. Hopwood, 1929b;
 Stromer, 1924 (1923), 1926
dorae, *Progalago*. MacInnes, 1943
Dorcas. Flamand, 1902 (1901)
dorcas, *Antilope*. Bourjot, 1869b; Thomas,
 1877
dorcas, *Gazella*. Arambourg, 1938a; Aram-
 bourg, Boule, etc., 1934; Cabrera, 1928;
 Campardou, 1917; Débruge & Mercier, 1914
 (1913); Depéret, Passemard & Rochette,
 1928; Devillers, 1948; Doumergue, 1913;
 Doumergue & Poirier, 1894; Ennouchi, 1948a,
 1949d; Gobert & Vaufrey, 1932; Howe &
 Movius, 1947; Joleaud, 1918 (1917), 1929,
 1936c; Joleaud & Menchikoff, 1934; Lavau-
 den, 1926; Pallary & Tommasini, 1892
 (1891); Romer, 1928; Ruhlmann, 1936
Dorcatherium. Arambourg, 1933a; Stromer,
 1911.
dorsalis, *Dendrohyrax*. Hahn, 1934
dreyeri, *Phacochoerus*. Dreyer & Lyle, 1931;
 Shaw, 1939b
dromedarius, *Camelus*. Arambourg, 1932b,
 1935a, 1938a; Pomel, 1893c; Romer, 1928;
 Thomas, 1884a, 1884b
Dryopithecus. Gregory & Hellman, 1939a,
 1939b, 1939c; Remane, 1924.
dubius, *Pomonomys*. Stromer, 1922 (1921),
 1924 (1923), 1926
duvernoyi, *Helladotherium*. Joleaud, 1937;
 Roman & Solignac, 1934
efficax, *Serengeticerus*. Dietrich, 1942b, 1945
elaphus, *Bos*. Débruge, 1903 (1902); Dou-
 mergue, 1926b
elaphus, *Cervus*. Arambourg, 1938a; Boule,
 1900a; Joleaud, 1910, 1913 (1912), 1926b,
 1935a; Romer, 1928
elegans, *Peloroceros*. Van Hoepen, 1947
Elephantulus. Hopwood, 1927d, 1928a;
 Joleaud, 1927c
Elephas. Arambourg, 1935 (1934); Arambourg
 & Ducellier, 1925; Doumergue, 1925; Grab-
 ham, 1920; Hopwood, 1931c; Kent, 1942a;
 Pallary, 1887b; Royer, 1927
Elephas sp. Andrews, 1912b; Arambourg,
 Boule, etc., 1934; Hopwood, 1931a; Joleaud,
 1936c; Joleaud & Lombard, 1933; Pomel,
 1888a, 1888b; Royer, 1927
elliotsmithii, *Dorudon*. Kellogg, 1936
elliotsmithii, *Zeuglodon*. Dart, 1923
ellipsiprymnus, *Kobus*. Cooke, 1939, 1948a;
 Dietrich, 1939, 1950; Zealley, 1916
elongatus, *Kraterohippus*. Cooke, 1950; Haugh-
 ton, 1932b; van Hoepen, 1930a
eocaenus, *Megalohyrax*. Andrews, 1903c, 1906;
 Hahn, 1934; Matsumoto, 1921, 1926; Os-
 born, 1908; Schlosser, 1910, 1911
Eocetus. Abel, 1905a; Fraas, 1904c
Eosiren. Blanckenhorn, 1921; Gregory, 1920;
 Stromer, 1910
Eotherium. Stromer, 1910
Eotragus. Pilgrim, 1947
equinus, *Hippotragus*. Arambourg, 1938a;
 Arambourg, Boule, etc., 1934; Clark, 1942;
 Dietrich, 1939, 1950; Doumergue, 1934;
 Joleaud, 1936b; Kent, 1942b; Zealley, 1916
Equus. Arambourg, 1935 (1934); Bourcart,
 1933b; Bourjot, 1869a; Clark, 1942; Devillers,
 1948; Doumergue, 1925; Gervais, 1867-1869;
 van Hoepen, 1940; Joleaud, 1933h; Kent,
 1942a; Lydekker, 1887; Pallary, 1887b;
 Pomel, 1894d
Equus sp. Arambourg, 1948b, 1949a; Aram-
 bourg & Arnould, 1950 (1949); Arambourg,
 Boule, etc., 1934; Bourjot, 1869c; Broom,
 1913a; Chubb, 1909 (1908); Cooke, 1948a,
 1949b; Depéret, Passemard & Rochette,
 1928; Doumergue, 1893, 1926b; Ennouchi,
 1948a; Estaunié, 1941; Grabham, 1920; Jol-
 eaud, 1933h; Kent, 1941b, 1942b; Leakey,
 Hopwood & Reck, 1931; Mennell & Chubb,
 1907; Pallary & Tommasini, 1892 (1891);
 Pomel, 1886 (1885)c, 1888a; Zealley, 1916
erectus, *Pithecanthropus*. Schepers, 1946, 1949b
Erinaceus, Joleaud, 1927c
ethiopicum, *Homotherium*. Arambourg, 1947a
ethiopicum, *Libyhipparion*. Joleaud, 1933a,
 1933b
ethiopicus, *Phacochoerus*. See *aethiopicus*, *Pha-*
cochoerus
ethiopica, *Sinopa*. Andrews, 1906
etruscus, *Rhinoceros*. Arambourg & Arnould,
 1950 (1949); Neuville & Ruhlmann, 1941
eucornutus, *Megalotragus*. Van Hoepen, 1932b
eulius, *Hylochoerus*. Arambourg, 1943a; Bouet
 & Neuville, 1930; Dietrich, 1942a; Hopwood,
 1926b
eulius, *Metridiochoerus*. Arambourg, 1943a
europaeus, *Erinaceus*. Marchand, 1935
Eurygnathohippus. Arambourg, 1948b
euryodon, *Saghattherium*. Matsumoto, 1926
evansi, *Limnopithecus*. MacInnes, 1943
exoptatus, *Archidiskodon*. Dietrich, 1941, 1942a

- faidherbi*, *Antilope*. Barone, 1944; Bourguignat, **1870**
faidherbi, *Musimon*. Bourguignat, **1870**.
faidherbi, *Ursus arctos*. Arambourg, 1932a, 1933c, 1938a; Arambourg, Boule, etc., 1934
faidherbianus, *Ursus*. Arambourg, 1927; Bourguignat, **1867**, 1868a, 1868b, 1868c, 1869, 1870
fajumensis, *Bunohyrax*. See *fayumensis*, *Bunohyrax*
fajumensis, *Geniohyus*. Andrews, **1904a**, 1906; Schlosser, 1910
falconeri, *Sus*. Dietrich, 1942a
familiaris, *Canis*. Clark, 1942; Ficheur & Brives, 1900; Flamand, 1902 (1901); Howe & Movius, 1947; Pomel, 1897 (1896)b; Romer, 1928
fayumensis, *Bunohyrax*. Hahn, 1934; Matsumoto, 1926; Schlosser, 1910, 1911
Felis. Bourjot, 1869c; Savornin, 1920
Felis sp. Chubb, 1909 (1908); Dalloni, 1940; Ennouchi, 1948a; Hopwood, 1931c; Mennell & Chubb, 1907; Pallary, 1887b
fisi, *Crocota crocata*. Dietrich, 1939
fossilis, *Equus*. Gervais, 1859; Niçaise, 1870a
fossilis, *Phacochoerus africanus*. Arambourg, 1947a, 1948b
fourtaui, *Hyaenaelurus*. von Koenigswald, **1948a**
fowleri, *Equus*. Cooke, 1948a, 1950; Wells, **1941**
fraasi, *Bothriogenys*. Weber, 1927-1928
fraasi, *Brachyodus*. Schmidt, **1913**
fraasii, *Metasinopa*. Osborn, **1909a**; Schlosser, 1911
fraasi, *Parapithecus*. Abel, 1914; Arambourg, 1943c; Schlosser, **1910**, **1911**; Weber, 1927-1928; Werth, 1919 (1918)
fraasi, *Protosiren*. Abel, **1904**, **1906**; Edinger, 1933, 1939; Priem, 1907, 1908 (1907); Sickenberg, 1931; Weber, 1927-1928
fracta, *Phthinylla*. Hopwood, **1929b**
fuchsi, *Stegodon*. MacInnes, **1942**

gadjingeri, *Parestigorgon*. Dietrich, **1950**
galeata, *Hystrix*. Dietrich, 1942a; Hopwood, 1931c
galera, *Herpestes*. Zealley, 1916
gambianus, *Cricetomys*. Zealley, 1916
garussi, *Aeotragus*. Dietrich, **1950**
gaudryi, *Antilope*. Thomas, 1884d
gaudryi, *Oreas*. Romer, 1928
gaudryi, *Palaeoreas*. Joleaud, 1910, 1936-37 (1935); Thomas, **1884a**, 1884c

gaudryi, *Taurotragus*. Dietrich, 1950; Joleaud, 1936-37 (1935)
Gazella. Arambourg, 1948b, 1949a; Arambourg & Arnould, 1950 (1949); Doumergue, 1925; Joleaud, 1933h; Schwarz, 1937; Vaufrey, 1940
Gazella sp. Arambourg, 1932b, 1935a; Doumergue, 1910, 1927, 1934; Gobert & Vaufrey, 1932; Joleaud, 1918 (1917); Kent, 1942b; Reck & Kohl-Larsen, 1936
gazella, *Dorcas*. Flamand, 1902 (1901)
gazella, *Gazella*. Dietrich, 1950; Schwarz, 1937
gazella, *Oryx*. Arambourg, 1947a
Genetta. Stromer, 1911, 1932 (1931)a
genetta, *Genetta*. Romer, 1928
Geniohyidae. Matsumoto, **1926**
Geniohyus. Osborn, 1908
Georhychus. Hopwood, 1928a
Georhychus sp. Zealley, 1916
Gerbillus. Romer, 1928
germano-africanus, *Atelodus*. Arambourg, 1947a
germano-africanus, *Ceratotherium simum*. Dietrich, 1939
germano-africanus, *Rhinoceros simus*. Arambourg, 1948b; Hilzheimer, **1925**; Reck, 1914b
gesilla, *Pithecus*. Flamand, 1902 (1901)
getulus, *Canis familiaris*. Pomel, 1897 (1896)b; Romer, 1928
giganteum, *Dinotherium*. Dietrich, 1942a; Joleaud, 1928a
giganteus, *Sivachoerus*. Tobien, 1936
gigas, *Equus*. Cooke, 1950; Haughton, 1932b; van Hoepen, **1930a**
gigas, *Geniohyus*. Matsumoto, **1926**
Giraffa. Arambourg, 1935 (1934), 1948b, 1949a; Grabham, 1920; Hopwood, 1931a; Joleaud, 1933h, 1937; Kent, 1942a; Reck, 1922 (1921)
Giraffa sp. Arambourg, 1949a; Dietrich, 1937b, 1939; Joleaud, 1910; Kent, 1941b, 1942b; Reck & Kohl-Larsen, 1936
giraffa, *Camelopardalis*. Joleaud, 1926b, 1934a, 1936c; Pallary, 1900; Romer, 1928
gnu, *Connochaetes*. See *gnu*, *Connochaetes*
gnu, *Connochaetes*. Arambourg, 1931c; Boule, 1900a; Cooke, 1949b; Joleaud, 1910, 1936b; Romer, 1928
Gomphotherium sp. Cooke, 1947a, 1949b
gorgops, *Hippopotamus*. Deraniyagala, 1947, 1948; Dietrich, **1926**, 1928; Hopwood, 1926b, 1939a; Kent, 1942b; Leakey, Hopwood & Reck, 1931; Vaufrey, 1947
Gorilla. Topinard, 1893
gorilla, *Gorilla*. Schepers, 1946.

- gorringei*, *Ancodon*. Andrews, 1906; Andrews & Beadnell, 1902; Osborn, 1908
- gorringei*, *Ancodus*. See *gorringei*, *Ancodon*
- gorringei*, *Brachyodus*. Schmidt, 1913
- grabhami*, *Hylochoerus*. Arambourg, 1943a; Bouet & Neuville, 1930; Hopwood, 1929a
- grabhami*, *Omochoerus*. Arambourg, 1943a
- gracile*, *Hipparion*. Bourcart, 1937; Choubert, 1946 (1945); Joleaud, 1910, 1912c, 1933b; Roman, 1931; Suess, 1932; Thomas, 1884a, 1884c, 1886; Tournouër, 1878b
- gracile*, *Meganthereon*. Broom, 1948a
- gracile*, *Moeritherium*. Andrews, 1902a, 1906; Matsumoto, 1923; Osborn, 1936; Schlosser, 1911
- gracilis*, *Gelasmotherium*. Bonarelli, 1947
- gracilis*, *Giraffa*. Arambourg, 1947a
- gracilis*, *Moeritherium*. See *gracile*, *Moeritherium*
- gracilis*, *Palaeotomys*. Broom, 1937b
- gracilis*, *Pedetes*. Broom, 1930, 1934
- grandi*, *Equus*. Joleaud, 1918 (1916)
- granti*, *Equus burchelli*. Joleaud, 1918 (1916)
- granti*, *Gazella*. Dietrich, 1939, 1950; Hopwood, 1936c; Joleaud, 1918 (1917); Romer, 1928; Schwarz, 1937
- gratus*, *Limnotragus*. Joleaud, 1936c; Roman, 1934
- grave*, *Barytherium*. Abel, 1914; Andrews, 1901a, 1901b, 1906; Weber, 1927-28
- grave*, *Bradytherium*. See *grave*, *Barytherium*
- grevyi*, *Equus*. Bourdelle, 1934; Cooke, 1950
- grimmii*, *Cephalopus*. Zealley, 1916
- grimmia*, *Sylvicapra*. Cooke, 1949b; Cooke & Wells, 1946; Wells & Cooke, 1942
- griqua*, *Archidiskodon*. Arambourg, 1948b; Dart, 1929a; Hopwood, 1926b, 1939a; Osborn, 1928
- griqua*, *Loxodonta*. Haughton, 1922 (1921); Osborn, 1928, 1934a
- griqua*, *Mammuthus*. Cooke, 1947a
- griqua*, *Metarchidiskodon*. Osborn, 1934a, 1942
- Griquatherium*. Arambourg, 1948b
- gundi*, *Ctenodactylus*. Romer, 1928
- guttatus*, *Acinonyx jubatus*. Romer, 1928
- habessinica*, *Procavia*. Hahn, 1934
- haeckeli*, *Propliopithecus*. Abel, 1914; Arambourg, 1943c; Schlosser, 1910, 1911; Weber, 1927-1928
- hagenstadi*, *Pedetes*. Dreyer & Lyle, 1931
- hahni*, *Bos primigenius*. Bettini, 1941
- Halitherium* sp. Dartevelle, 1935
- hanekomi*, *Archidiskodon*. Dart, 1929a
- hanekomi*, *Loxodonta*. Cooke, 1947a, 1949b
- hanekomi*, *Palaeoloxodon*. Osborn, 1934a, 1942
- harrisi*, *Equus*. Broom, 1928a; Cooke, 1949b, 1950; Cooke & Wells, 1946; Dreyer & Lyle, 1931; Haughton, 1932b
- hartmanni*, *Equus zebra*. Bourdelle, 1934
- haughtoni*, *Griquatherium*. Cooke, 1949b
- hausleitneri*, *Mystromys*. Broom, 1937b, 1948a
- hauslichtneri*, *Mystromys*. See *hausleitneri*, *Mystromys*
- Helladotherium*. Joleaud, 1927a
- Helladotherium* sp. Joleaud, 1926b
- helmei*, *Bubalis*. Dreyer & Lyle, 1931; van Hoepen, 1932b
- helmei*, *Equus*. Dreyer & Lyle, 1931; Haughton, 1932b
- helmei*, *Hippopotamus*. Cooke, 1949a; Dreyer & Lyle, 1931
- helmei*, *Pelorocerus*. Cooke, 1941a, 1948a, 1949b; Cooke & Wells, 1946; van Hoepen, 1947; Shapiro, 1943; Wells & Cooke, 1942
- helmei*, *Phacochoerus*. Cooke, 1949a; Dreyer & Lyle, 1931; Shaw, 1939b; Wells & Cooke, 1942
- helmoedi*, *Gazella*. Van Hoepen, 1932b
- Hemitragus*. Joleaud, 1927a; Roman, 1931
- hennigi*, *Gazella*. Dietrich, 1950
- hennigi*, *Metaschizotherium*. Arambourg, 1948b; Dietrich, 1941, 1942a
- Herpestes*. Stromer, 1932 (1931)a
- Herpestes* sp. Howe & Movius, 1947; Pomel, 1897 (1896)b; Zealley, 1916
- heseloni*, *Mesochoerus*. Cooke, 1949a; Leakey, 1943b
- heseloni*, *Omochoerus*. Arambourg, 1947a
- hessica*, *Lutra*. Stromer, 1920
- Heterohyrax*. Hahn, 1934
- hieroglyphicus*, *Synaptochoerus*. Arambourg, 1943a; Cooke, 1949a; van Hoepen & van Hoepen, 1932; Shaw, 1939b
- hindei*, *Aonyx capensis*. Hopwood, 1931c
- hintoni*, *Leptailurus*. Hopwood, 1928a
- hipkini*, *Stylohipparion*. Cooke, 1950; van Hoepen, 1932a; Joleaud, 1933a, 1933b
- hipkinsi*, *Stylohipparion*. See *hipkini*, *Stylohipparion*
- Hipparion*. Andrews, 1902b; Arambourg, 1935 (1934); Bourcart, 1937; Choubert & Ennouchi, 1946; Joleaud, 1919a, 1919b, 1927a, 1933a; Kent, 1942a; Leakey, Hopwood & Reck, 1931; Pomel, 1878b; Romer, 1928; Savornin, 1920; Thomas, 1879a; Tournouër, 1878a, 1878b, 1878c

- Hipparion* sp. Dalloni, 1940; Dietrich, 1939; Kent, 1941b; Leakey, Hopwood & Reck, 1931; Pomel, 1878a; Reck & Kohl-Larsen, 1936; Solignac, 1927; Stromer, 1907b
- Hippoleakius*. Deraniyagala, 1947
- hipponensis*, *Hippopotamus*. Andrews, 1902b; Arambourg, 1944, 1945 (1944), 1947a; Dalloni, 1940; Depéret, 1921; Gaudry, 1876a, 1876b; Joleaud, 1910, 1921 (1920), 1923a, 1933c; Papier, 1876, 1878; Pomel, 1876, 1878b, 1890b, 1896d; Romer, 1928; Savornin, 1920; Stromer, 1907b, 1914; Thomas, 1879a, 1884a; Vaufreij, 1928
- Hippopotamus*. Andrews, 1923c; Arambourg, 1935 (1934); Arambourg & Ducellier, 1925; Doumergue, 1922, 1925; Grabham, 1920; Gregory, 1920; Hopwood, 1927, 1931a; Joleaud, 1927a, 1933h, 1936c; Kent, 1942a; Pallary, 1887b; Pomel, 1888a, 1894d; Reck, 1922 (1921); Thomas, 1884a; Zittel, 1883
- Hippopotamus* sp. Arambourg, 1949a; Arambourg & Arnould, 1950 (1949); Cooke, 1939, 1948a, 1949b; Pomel, 1888b, 1890b; Solignac, 1927; Zealley, 1916
- Hippotigris*. Van Hoepen, 1940
- Hippotigris* sp. Joleaud, 1933b, 1934b, 1936c
- Hippotragus* sp. Cooke, 1941a; Dietrich, 1950; Dreyer & Lyle, 1931
- hircus*, *Capra*. Arambourg, 1938a; Campardou, 1917; Howe & Movius, 1947; Joleaud, 1918 (1916), 1933d; Marchand, 1935; Romer, 1928; Ruhlmann, 1936
- hirtipes*, *Gerbillus*. Doumergue & Poirier, 1894
- hispanica*, *Capra*. Bourjot, 1869b; Pallary & Tommasini, 1892 (1891)
- hobleyi*, *Deinotherium*. Andrews, 1911a, 1911b, 1914; Dixey, 1944; MacInnes, 1942; Osborn, 1936
- holmwoodi*, *Diceros bicornis*. Dietrich, 1945; Hopwood, 1939b
- Homo*. Broom & Robinson, 1950a; von Koenigswald, 1942
- Homotherium*. Arambourg, 1948b
- hopwoodi*, *Deinotherium*. Osborn, 1936
- humilis*, *Phiomysoides*. Stromer, 1924 (1923), 1926
- hunteri*, *Beatragus*. Dietrich, 1950; Schwarz, 1937
- Hyaemoschus*. Stromer, 1911
- Hyaena*. Arambourg, 1949a; Bourjot, 1869c; Fourtau, 1920; Gervais, 1859
- Hyaena* sp. Arambourg, 1949a; Chubb, 1909 (1908); Ennouchi, 1948a; Mennell & Chubb, 1907; Petrocchi, 1941b; Zealley, 1916
- hyaena*, *Hyaena*. Dietrich, 1942a; Doumergue & Poirier, 1894; Howe & Movius, 1947
- Hyaenodon* sp. Andrews, 1906
- hydruntinus*, *Equus asinus*. Petrocchi, 1941b
- Hylobates*. Kohlbrugge, 1891
- Hylochoerus*. Arambourg, 1935 (1934); Hopwood, 1931a, 1939a
- Hylochoerus* sp. Arambourg, 1934b; Kent, 1942b; Reck & Kohl-Larsen, 1936
- hypsondon*, *Potamochoeroides*. Dale, 1948
- hypsoygenys*, *Canis*. Campardou, 1917
- Hypsohipparion*. Dietrich, 1941
- Hystrix*. Bourjot, 1869c; Hopwood, 1928a; Joleaud, 1919c
- Hystrix* sp. Chubb, 1909 (1908); Dietrich, 1939; Ennouchi, 1948a; Hopwood, 1939a; Mennell & Chubb, 1907; Reck & Kohl-Larsen, 1936
- hysudricus*, *Elephas*. Arambourg, 1942; Reck, 1914b
- hysudricus*, *Sus*. Joleaud, 1933h
- ibericus*, *Bos*. Arambourg, 1938a; Campardou, 1917; Doumergue, 1907, 1925, 1926b; Flammant, 1902 (1901); Marchand, 1934b, 1935; Pomel, 1894a, 1894d; Vaufreij, 1940
- ibericus*, *Bos brachyceros*. Joleaud, 1918b
- ibericus*, *Bos taurus*. Arambourg, Boule, etc., 1934; Barone, 1944; Débruge & Mercier, 1914 (1913); Doumergue, 1913; Ennouchi, 1949e; Gobert & Vaufreij, 1932; Joleaud, 1918 (1916); Romer, 1928
- ichneumon*, *Herpestes*. Arambourg, 1938a; Campardou, 1917; Doumergue, 1923; Doumergue & Poirier, 1894; Romer, 1928
- icosiensis*, *Hippopotamus*. Boule, 1900a; Dalloni, 1940; Ficheur & Brives, 1900; Flammant, 1902 (1901); Joleaud, 1923a; Pomel, 1896d
- icosiensis*, *Hippopotamus amphibius*. Joleaud, 1910
- imaguncula*, *Hippopotamus*. Arambourg, 1934b; Hopwood, 1926b, 1939a; Kent, 1942b
- imberbis*, *Strepsiceros*. Arambourg, 1947a
- indicus*, *Elephas*. Reck, 1914b
- inexpectatus*, *Austrolagomys*. Stromer, 1924 (1923); 1926
- ingens*, *Dinopithecus*. Broom, 1937b, 1940a; Mouta, 1950
- intermedius*, *Dorudon*. Kellogg, 1936
- intermedius*, *Palaeomastodon*. Matsumoto, 1922, 1924; Osborn, 1936, 1938
- intermedius*, *Zeuglodon*. Andrews, 1923b; Dart, 1923; Kellogg, 1928

- inuus*, *Macacus*. Arambourg, Boule, etc., 1934
inuus, *Pithecus*. Bourguignat, 1870; de Lamothe, 1907
iolensis, *Elephas*. Arambourg, 1938a; Boule, 1900a; Dalloni, 1940; Depéret & Mayet, 1923; Doumergue, 1922; Ennouchi, 1949b, 1950b; de Lamothe, 1904; Romer, 1928
iolensis, *Elephas antiquus*. Joleaud, 1914a
irroratus, *Otomys*. Dreyer & Lyle, 1931
isabella, *Gazella*. Gaillard, 1934; Joleaud, 1918 (1917); Romer, 1928
isis, *Prozeuglodon*. Kellogg, 1936
isis, *Zeuglodon*. Abel, 1914; Andrews, 1904a, 1906; Kellogg, 1928; Stromer, 1908b; Weber, 1927-28
izodi, *Papio*. Gear, 1926; Jones, 1937 (1936)
izodi, *Parapapio*. Broom, 1940a; Dart, 1949g
- jacksoni*, *Pronotochoerus*. Cooke, 1949a; Leakey, 1943b
Jaculus. Romer, 1928
janenschi, *Gazella*. Dietrich, 1950
janenschi, *Xerus*. Dietrich, 1941, 1942a
jeanneli, *Listriodon*. Arambourg, 1933b
johnstoni, *Procavia*. Hahn, 1934
jolensis, *Elephas*. Pomel, 1896a
jolensis, *Palaeoloxodon*. Osborn, 1942
jonesi, *Parapapio*. Broom, 1940a; Kitching, Wells & Westphal, 1948
jubatus, *Acinonyx*. Hopwood, 1947a, 1947b; Romer, 1928
jubatus, *Cynaelurus*. Zealley, 1916
- kabylicus*, *Lepus*. Arambourg, 1938a; Howe & Movius, 1947; Romer, 1928
kaisensis, *Hippopotamus*. Hopwood, 1939a
kaisensis, *Hippopotamus amphibius*. Deraniyagala, 1948; Hopwood, 1926b
kaisensis, *Stegodon*. Arambourg, 1948b; Hopwood, 1939a; Kent, 1942b
kaiseri, *Metapterodon*. Stromer, 1924 (1923), 1926
kattwinkeli, *Alcelaphus*. Dietrich, 1950; Kent, 1942b; Schwarz, 1932, 1937
kenyensis, *Anancus*. Arambourg, 1948b
kenyensis, *Pentalophodon sivalensis*. MacInnes, 1942
kevella, *Antelope*. Pomel, 1895
kevella, *Dorcas*. Doumergue, 1923; Joleaud, 1918 (1917)
kevella, *Gazella*. Campardou, 1917; Débruge & Mercier, 1914 (1913); Doumergue, 1913, 1921a, 1926b, 1927, 1935; Lavauden, 1926
kevella, *Gazella dorcas*. Cabrera, 1928
kirki, *Rhynchotragus*. Hopwood, 1936c
kisumuensis, *Trilophodon angustidens*. Arambourg, 1946 (1945); MacInnes, 1942
kob, *Adenota*. Dietrich, 1939, 1950
kob, *Kobus*. Hopwood, 1939a
Kobus. Arambourg, 1948b
Kobus sp. Arambourg, 1947a; Dietrich, 1939, 1950; Reck & Kohl-Larsen, 1936
kohllarseni, *Gazella*. Dietrich, 1950
kohllarseni, *Simatherium*. Dietrich, 1941, 1942a, 1950
Koiropotamus. Dietrich, 1937a
Koiropotamus sp. Arambourg, 1943a; Dietrich, 1939; Reck & Kohl-Larsen, 1936
koiropotamus, *Potamochoerus*. Cooke, 1949a
koruensis, *Xenopithecus*. Hopwood, 1933a, 1933b; MacInnes, 1943
kudu, *Strepsiceros*. Dreyer & Lyle, 1931
kuhni, *Equus*. Broom, 1928a; Cooke, 1941a, 1948a, 1949b, 1950; Cooke & Wells, 1946; Dreyer & Lyle, 1931; Haughton, 1932b; Shapiro, 1943; Wells & Cooke, 1942
kuhni, *Palaeoloxodon*. Osborn, 1934a, 1942
kuhni, *Pilgrinia*. Dart, 1929a
- langi*, *Elephantomys*. Broom, 1937b
langi, *Elephantulus*. Broom, 1948a
larteti, *Ursus arctos*. Arambourg, 1932a, 1933c, 1938a; Arambourg, Boule, etc., 1934; Barone, 1944
larteti, *Ursus spelaeus*. Joleaud, 1910
lartetianus, *Musimon*. Bourguignat, 1870
lartetianus, *Ursus*. Arambourg, 1927, 1933c; Bourguignat, 1868a, 1869, 1870; Campardou, 1917
laticolumnatus, *Phacochoerus*. Arambourg, 1943a; Cooke, 1949a; van Hoepen & van Hoepen, 1932; Shaw, 1939b
laticornutus, *Gorgon*. Van Hoepen, 1932b
latifrons, *Canis familiaris*. Pomel, 1897 (1896)b
latirostris, *Lupulella mesomelas*. Pohle, 1928
leakeyi, *Simopithecus*. Hopwood, 1934, 1936a; Vaufrey, 1947
legetet, *Limnopithecus*. Arambourg, 1943c; Hopwood, 1933a, 1933b; MacInnes, 1943
Leggada. Hopwood, 1928a
Leo. Kretzoi, 1929
Leo sp. Dietrich, 1942a
leo, *Felis*. Arambourg, 1932b, 1938a; Bourguignat, 1870; Broom, 1939d; Campardou, 1917; Chubb, 1909 (1908); Depéret, Passemard & Rochette, 1928; Doumergue & Poirier, 1894;

- Estaunié, 1941; Gobert & Vaufrey, 1932; Hopwood, 1928a; Howe & Movius, 1947; Joleaud, 1933h; Kretzoi, 1929; Lönnberg, 1937; Mennell & Chubb, 1907; Pallary, 1887b; Pomel, 1886 (1885)c, 1888a, 1888b; Reck & Kohl-Larsen, 1936; Romer, 1928; Stromer, 1911
- leo*, *Felis leo*. Howe & Movius, 1947
- leo*, *Panthera*. Dietrich, 1939; Hopwood, 1947a, 1947b
- leopardus*, *Felis*. Flamand, 1902 (1901)
- leporina*, *Antilope*. Doumergue, 1907; Joleaud, 1918 (1917); Pomel, 1895
- leporina*, *Cephalophus*. Joleaud, 1910
- leporina*, *Grimmia*. Savornin, 1920
- leporina*, *Lithocranius*. Romer, 1928
- Leptailurus* sp. Hopwood, 1939a
- leptoceros*, *Gazella*. Joleaud, 1929; Romer, 1928
- leptognathus*, *Pterodon*. Osborn, 1909a
- leptorhinus*, *Rhinoceros*. Neuville & Ruhlmann, 1941
- Lepus*. Joleaud, 1919c
- Lepus* sp. Hopwood, 1931c; Kent, 1942b; Stromer, 1907b
- lervia*, *Ammotragus*. Arambourg, 1927, 1929a, 1931a, 1933 (1931), 1938a; Arambourg, Boule, etc., 1934; Débruge & Mercier, 1914 (1913); Doumergue, 1913; Howe & Movius, 1947; Joleaud, 1918 (1916), 1927b, 1928b; Marchand, 1932; Romer, 1928
- lervia*, *Ovis*. Doumergue, 1923, 1926b
- lervia*, *Tragelaphus*. Doumergue, 1935
- letourneuxianus*, *Ursus*. Arambourg, 1927, 1933c; Bourguignat, 1868a, 1869, 1870
- leucophaeus*, *Hippotragus*. Dietrich, 1950; Schwarz, 1937
- leucoryx*, *Antilope*. Pomel, 1895
- leucoryx*, *Oryx*. Campardou, 1917; Joleaud, 1910, 1918c, 1918d
- liberiensis*, *Choeropsis*. Anthony, 1946
- liberiensis*, *Hippopotamus*. Anthony, 1948; Vaufrey, 1928
- libycus*, *Aulaxinuus*. Stromer, 1920
- libyca*, *Eosiren*. Abel, 1904; Andrews, 1902a, 1906; Edinger, 1933; Stromer, 1921; Weber, 1927-1928
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- Limnopithecus* sp. Kohlbrugge, 1891
- Limnotragus*. Roman, 1934
- Limnotragus* sp. Roman, 1935 (1934)
- Listriodon*. Arambourg, 1933a
- Lithocranius*. Joleaud, 1918 (1917); Romer, 1928
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- longiceps*, *Palaeotragiscus*. Broom, 1930, 1934
- longirostris*, *Mastodon*. Choubert & Ennouchi, 1946; Roman, 1931
- longirostris*, *Tetralophodon*. Ennouchi, 1949a, 1949b
- Lophuromys*. Hopwood, 1928a
- louwi*, *Equus*. Arambourg, 1948b; Cooke, 1950; Haughton, 1932b; van Hoepen, 1930b
- Loxodonta* sp. Cooke, 1949b; Reck & Kohl-Larsen, 1936
- loxodontoides*, *Archidiskodon*. Dart, 1929a; Osborn, 1934a, 1942
- luederitzi*, *Diamantomys*. Stromer, 1922 (1921), 1924 (1923), 1926
- lugardi*, *Pappocetus*. Andrews, 1920 (1919); Kellogg, 1928, 1936
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- lunata*, *Cobus unctosus*. Romer, 1928
- lunatus*, *Damaliscus*. Cooke, 1949b; Zealley, 1916
- lunata*, *Oegoceros*. Joleaud, 1936-1937 (1935)
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Lycyaena. Arambourg, 1948b
lylei, *Equus*. Cooke, 1950; Dreyer & Lyle, 1931; Haughton, 1932b
lynx, *Felis*. Barbin, 1912
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lyonsi, *Ptolemaia*. Osborn, 1908; Schlosser, 1910, 1911
lyrocera, *Menelikia*. Arambourg, 1941, 1947a, 1948b

Macaca. Topinard, 1893; Stromer, 1911
Macacus. See *Macaca*
Machairodus sp. Hopwood, 1926b
macinnesi, *Limnopithecus*. Le Gros Clark & Leakey, 1950
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macrodon, *Saghatherium*. Matsumoto, 1926
macrognathus, *Apterodon*. Andrews, 1906, 1907b; Osborn, 1908, 1909a; Schlosser, 1910, 1911
macrognathus, *Pterodon*. Andrews, 1904a
macrospondylus, *Zeuglodon*. Kellogg, 1936
maculicollis, *Lutra*. Hopwood, 1931c
magnus, *Geniohyus*. Matsumoto, 1926
magnum, *Saghatherium*. Andrews, 1904a, 1906, 1907b; Hahn, 1934; Matsumoto, 1921; Schlosser, 1910, 1911
major, *Atelerix*. Broom, 1937d, 1948a
major, *Bunohyrax*. Hahn, 1934; Matsumoto, 1926; Schlosser, 1911
major, *Connochaetes taurinus*. Dietrich, 1950
majus, *Eotherium*. Zdansky, 1938
major, *Geniohyus*. Andrews, 1904a, 1906; Schlosser, 1910
major, *Gorgopithecus*. Broom & Robinson, 1949f
major, *Hippopotamus*. Flamand, 1902 (1901); Gervais, 1859, 1867-1869; Joleaud, 1912c, 1923a; Pomel, 1886 (1885)b, 1886 (1885)c; Thomas, 1884c
major, *Hippopotamus amphibius*. Dalloni, 1940; Gaillard, 1934
majus, *Koiropotamus*. Hopwood, 1934; Kent, 1942b
major, *Parapapio*. Broom, 1940a; Broom & Robinson, 1949f
major, *Potamochoerus*. Arambourg, 1943a; Dietrich, 1942a;
major, *Proconsul*. Le Gros Clark & Leakey, 1950
majus, *Potamochoerus*. Cooke, 1949a; Leakey, 1942
majus, *Saghatherium*. Andrews, 1906; Hahn, 1934; Schlosser, 1910, 1911
makapani, *Bos*. Broom, 1937d
makapani, *Gypsorhynchus*. Broom, 1948b
makapani, *Parapapio*. Broom & Hughes, 1949
markgrafi, *Libypithecus*. Abel, 1914; Edinger, 1938; Stromer, 1913, 1920; Weber, 1927-1928
markgrafi, *Moeripithecus*. Schlosser, 1910, 1911
maroccanus, *Elephas atlanticus*. Arambourg, 1938a; Ennouchi, 1948a, 1949b, 1949c, 1950b
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maroccanus, *Thos aureus*. Howe & Movius, 1947
marsupialis, *Antidorcas*. Cooke, 1941a, 1949b; Wells & Cooke, 1942
Masritherium. Fourtau, 1920
massaesilium, *Hipparion*. See *massoesyllum*, *Hipparion*
massaessilia, *Gazella*. See *massoessilia*, *Gazella*
massaesyia, *Gazella dorcas*. Cabrera, 1928; Joleaud, 1929
massasilia, *Gazella*. See *massoessilia*, *Gazella*
massoessilia, *Antilope*. Pomel, 1895
massoessilia, *Gazella*. Dalloni, 1940; Joleaud, 1918 (1917), 1929; Lavauden, 1926
massoesyllum, *Hipparion*. Joleaud, 1933a; Pomel, 1897d
Mastodon. Arambourg, 1948b; Brives, 1920; Gervais, 1848-1852; Hopwood, 1927; Joleaud, 1919c, 1927a; Romer, 1928; Thomas, 1879a, 1884a
Mastodon sp. Darteville, 1935; Fraas, 1907a; Osborn, 1928; Stromer, 1907b
matheroni, *Capreolus*. Roman, 1931
maupasi, *Antilope*. Doumergue, 1893; Doumergue & Poirier, 1894; Pomel, 1892d, 1895
maupasi, *Cervicapra*. Ruhlmann, 1936
maupasi, *Cervicapra redunca*. Arambourg, 1938a; Romer, 1928
maupasi, *Kobus tinctosus*. Joleaud, 1910
maupasi, *Nagor*. Doumergue, 1927; Flamand, 1902 (1901); Joleaud, 1936-37 (1935)
maupasi, *Redunca*. Ennouchi, 1948a
maupasi, *Redunca redunca*. Joleaud, 1936-37 (1935)
maupassii, *Nagor*. See *maupasi*, *Nagor*
mauritanicus, *Bos primigenius*. Boule, 1900a; Doumergue, 1893; Duerst, 1900; Joleaud, 1918b; Romer, 1928; Thomas, 1881, 1884a, 1884d, 1886

- mauritanicus*, *Equus*. Arambourg, 1938a, 1938b, 1948b; Boule, 1900a; Dalloni, 1940; Doumergue, 1926a, 1927, 1934, 1935; Ennouchi, 1948a, 1949c, 1949d, 1949e; Flamand, 1902 (1901); Joleaud, 1910, 1934b, 1936c; Pomel, 1888a, 1888b, 1897d; Romer, 1928; Ruhlmann, 1936; Vaufrey, 1940
- mauritanicus*, *Equus burchelli*. Howe & Movius, 1947; Romer, 1928
- mauritanicus*, *Equus caballus*. Campardou, 1917
- mauritanicus*, *Phacochoerus*. Flamand, 1902 (1901); Joleaud, 1910, 1933g; Pomel, 1897b;
- mauritanicus*, *Phacochoerus aethiopicus*. Howe & Movius, 1947; Romer, 1928
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- meadowsi*, *Notochoerus*. Arambourg, 1943a; Broom, 1928a, 1948a; Cooke, 1949a; Shaw, 1938, 1939b
- meadowsi*, *Phacochoerus*. Cooke, 1949a
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- megaceros*, *Cervus*. Joleaud, 1913 (1912)
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- meinerzhageni*, *Hylochoerus*. Hopwood, 1931c
- meiringi*, *Phacochoerus*. Cooke, 1949a; Dreyer & Lyle, 1931; Shaw, 1939b
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- melitensis*, *Elephas*. Pomel, 1896a; Romer, 1928
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- Mellivora* sp. Joleaud, 1936c
- Menelikinae*. Arambourg, 1947a
- mercki*, *Rhinoceros*. Arambourg, 1931c, 1932b, 1935a, 1938a; Dalloni, 1940; Ennouchi, 1948a, 1949b; Joleaud, 1936b; Lartet, 1868; Neuville & Ruhlmann, 1941b; Romer, 1928; Ruhlmann, 1936
- meridionalis*, *Archidiskodon*. MacInnes, 1942; Osborn, 1928
- meridionalis*, *Elephas*. Arambourg, 1938a, 1942, 1943 (1942), 1949a; Dalloni, 1940; Ennouchi, 1949b, 1950b; Gervais, 1849b, 1867-1869; Hopwood, 1926b; Joleaud, 1910, 1912c, 1914a, 1933h; Niçaise, 1870a; Osborn, 1928; Pomel, 1896a; Romer, 1928; Savornin, 1920; Thomas, 1884a, 1884c
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- Merycopotamus*. Joleaud, 1927a
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- Mesopithecus*. MacInnes, 1943
- Metarchidiskodon*. Osborn, 1934a
- Metridiochoerus*. Arambourg, 1948b; Dietrich, 1937a; Shaw, 1939b
- Metridiochoerus* sp. Cooke, 1949a; Kent, 1941b; Leakey, 1942
- mezi*, *Mixtotherium*. Schmidt, 1913
- micrognathus*, *Geniohyus*. Hahn, 1934; Matsumoto, 1926; Schlosser, 1910, 1911
- milleti*, *Archidiskodon*. Arambourg, 1948b; Dart, 1929a; Osborn, 1934a, 1942
- minus*, *Ancodon*. Osborn, 1908
- minor*, *Geniohyus*. Hahn, 1934
- minor*, *Gypsorhynchus*. Broom, 1948b
- minor*, *Hippopotamus*. Joleaud, 1923a
- minor*, *Megalohyrax*. Andrews, 1904a, 1906; Hahn, 1934; Matsumoto, 1921, 1926; Schlosser, 1910, 1911
- minor*, *Palaeomastodon*. Andrews, 1904a, 1905, 1906
- minor*, *Petromys*. Broom, 1939b
- minor*, *Phiomia*. Matsumoto, 1924; Osborn, 1936, 1938
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- minutus*, *Geniohyus*. Schlosser, 1910
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- mirum*, *Peloroceros*. Van Hoepen, 1947
- Mixohyrax*. Schlosser, 1910

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modestus, *Tapinochoerus*. Arambourg, 1943a;
 Cooke, 1949a, 1949b; van Hoepen & van
 Hoepen, 1932; Shaw, 1939b
Moeripithecus. Remane, 1921
Moeritherium. Andrews, 1902c, 1904a; Gre-
 gory, 1920; Joleaud, 1927a; Matsumoto,
 1922, 1923; Osborn, 1909b, 1923; Petronie-
 vics, 1923; Stromer, 1910; Weber, 1904
Moeritherium sp. Andrews, 1906
mogharensis, *Dryopithecus*. Fourtau, 1920;
 Remane, 1924
moneyi, *Brachyodus*. Fourtau, 1920
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 Schwarz, 1937
moschatus, *Nesotragus*. Dietrich, 1950;
 Schwarz, 1937
Mus. Hopwood, 1928a; Romer, 1928
Mus sp. Arambourg, 1931c; Chubb, 1909
 (1908); Mennell & Chubb, 1907
musimon, *Ovis*. Bourguignat, 1870
Myohyracidae. Andrews, 1914
Myohyrax. Hopwood, 1929b; Stromer, 1926
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namaquense, *Notohipparion*. Cooke, 1950;
 Houghton, 1932b; van Hoepen, 1932a;
 Joleaud, 1933b
namaquensis, *Parapedetes*. Stromer, 1924
 (1923), 1926
nasomaculata, *Addax*. Balout, 1942
neanderthalensis, *Homo*. Schepers, 1949b
neotertiarius, *Bathyergoides*. Stromer, 1924
 (1923), 1926
neumanni, *Papio*. Dietrich, 1939; Hopwood,
 1931c
nicoli, *Afrochoerus*. Cooke, 1949a; Leakey, 1942
niger, *Hippotragus*. Cooke, 1947b, 1949b;
 Zealley, 1916
nigricauda, *Tatera*. Dietrich, 1942a
nilosius, *Vulpes*. Estaunié, 1941
niloticus, *Canis*. Campardou, 1917; Doumergue
 & Poirier, 1894; Pallary & Tommasini, 1892
 (1891)
niloticus, *Megalohyrax*. Hahn, 1934; Matsu-
 moto, 1921, 1926
niloticus, *Miohyrax*. Weber, 1927-1928
niloticus, *Mixohyrax*. Hahn, 1934; Schlosser,
 1910, 1911
nilssoni, *Bubalus*. Lönnberg, 1933; Nilsson,
 1932, 1945
- niro*, *Hippotragus*. Dietrich, 1950; Hopwood,
 1936a
nivalis, *Putorius*. Romer, 1928
nodicornis, *Antilope*. Ficheur & Brives, 1900;
 Pomel, 1895
nodicornis, *Gazella*. Joleaud, 1918 (1917), 1929
Notochoerus. Arambourg, 1948b; Dietrich,
 1937a; Shaw, 1939b
Notochoerus sp. Broom, 1937b
numidicus, *Equus*. Arambourg, 1948 (1947),
 1948b, 1949a; Pomel, 1897d
numidicus, *Putorius nivalis*. Romer, 1928
nyanzae, *Archidiskodon planifrons*. MacInnes,
 1942
nyanzae, *Proconsul*. Le Gros Clark & Leakey,
 1950
nyanzae, *Stegolophodon*. Arambourg, 1948b
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obermeyeri, *Procavia*. Broom, 1937b
obliqua, *Loxodonta africana*. Dart, 1929a;
 Osborn, 1934a, 1942
occitana, *Pristiphoca*. Stromer, 1913
ocreata, *Felis*. Chubb, 1909 (1908); Débruge &
 Mercier, 1914 (1913); Doumergue, 1913;
 Gobert & Vaufrey, 1932; Romer, 1928
Okapia. Joleaud, 1937
oldowayensis, *Equus*. Hopwood, 1937; Kent,
 1942b
olduvaiensis, *Helladotherium*. Hopwood, 1934
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oldowayensis, *Pelorovis*. Dietrich, 1950; Jol-
 eaud, 1933d; Reck, 1925, 1928
olduvaiensis, *Sivatherium*. Arambourg, 1947a,
 1948b; Dietrich, 1937b, 1942a; Hopwood,
 1936a; Kent, 1942b; Vaufrey, 1947
Omochoerus. Arambourg, 1948b
Omochoerus sp. Arambourg, 1949a
opisthonomus, *Bos*. Balout, 1942; Barbin, 1910;
 Boule, 1900a; Campardou, 1917; Débruge,
 1903 (1902); Depéret, Passemard & Rochette,
 1928; Doumergue, 1907, 1910, 1919, 1925,
 1926b, 1927, 1934, 1935; Doumergue &
 Poirier, 1894; Duerst, 1900; Ficheur & Brives,
 1900; Flamand, 1902 (1901); Marchand,
 1932; Pomel, 1894a, 1894d; Vuillemot, 1937
oranensis, *Antilope*. Barbin, 1910; Pomel, 1895
oranensis, *Dorcas*. Doumergue, 1907, 1935;
 Joleaud, 1918 (1917)
oranensis, *Gazella*. Joleaud, 1929; Pilgrim &
 Hopwood, 1928
Oreas. Flamand, 1902 (1901)

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oreotragus, *Oreotragus*. Hopwood, 1936c; Zealley, 1916
orientalis, *Provampryus*. Schlosser, 1911
orientalis, *Vampyravus*. Schlosser, 1910
Orycteropus. Clark, 1942; Gregory, 1920; Stromer, 1911
Orycteropus sp. Kent, 1942b
Oryx. Arambourg, 1949a; Devillers, 1948; Hopwood, 1926b; Joleaud, 1918c, 1936-37 (1935)
Oryx sp. Arambourg, 1949a, 1950 (1949); Ennouchi, 1948a
oryx, *Taurotragus*. Arambourg, 1931c, 1932b; Broom, 1913a; Chubb, 1909 (1908); Clark, 1942; Cooke, 1941a, 1949b; Cooke & Wells, 1946; Dietrich, 1939, 1950; Dreyer & Lyle, 1931; Hopwood, 1928a; Joleaud, 1936b; Kent, 1942b; Mennell & Chubb, 1907; Schwarz, 1937; Wells & Cooke, 1942
osborni, *Myohyrax*. Hopwood, 1929b
osborni, *Phiomia*. Matsumoto, 1922, 1924; Osborn, 1936, 1938
osiris, *Anancus*. Arambourg, 1946 (1945), 1947a, 1947b, 1948b, 1949a; Arambourg & Arnould, 1950 (1949); Ennouchi, 1949b
osiris, *Dorudon*. Kellogg, 1936
osiris, *Zeuglodon*. Abel, 1905a, 1905b, 1914; Andrews, 1901c, 1906, 1923b; Dames, 1894; Dart, 1923; Kellogg, 1928, 1936; Pompecki, 1922; Stromer, 1903a, 1903c, 1903d, 1908a, 1908b; Weber, 1927-1928
oswaldi, *Myohyrax*. Andrews, 1914; Stromer, 1924 (1923), 1926
oswaldi, *Simopithecus*. Andrews, 1916; Hopwood, 1936a; Kent, 1942b; Leakey, 1943a; Reck & Kohl-Larsen, 1936
Otocyon sp. Reck & Pohle, 1922
Otomys. Hopwood, 1928a
Otomys sp. Chubb, 1909 (1908); Mennell & Chubb, 1907
Ovis. Doumergue, 1925
Ovis sp. Boule, 1900a; Ennouchi, 1948a; Gobert & Vaufrey, 1932; Pallary & Tommasini, 1892 (1891); Petrocchi, 1941b
Pachyaena. Schlosser, 1911
pachyceros, *Taurotragus oryx*. Dietrich, 1939, 1950; Schwarz, 1937
pachygenis, *Cervus*. See *pachygenys*, *Cervus*
pachygenys, *Cervus*. Ficheur & Brives, 1900; Joleaud, 1910, 1912a, 1913 (1912), 1914c, 1916 (1915); Marchand, 1932; Pomel, 1892d, 1893c, 1894d
pachygenys, *Megaceroides*. Joleaud, 1914c
pachygnathus, *Omochoerus*. Arambourg, 1943a
pachygnathus, *Rhinoceros*. Roman & Solignac, 1934
Pachyhyrax. Schlosser, 1910
paiceae, *Mesochoeerus*. Arambourg, 1948b; Cooke, 1949a, 1949b; Shaw & Cooke, 1941
paiceae, *Notochoerus*. Broom, 1931, 1937b; Cooke, 1949a
palaeindicus, *Bubalus*. Duerst, 1900
palaeindicus, *Buffelus*. Dalloni, 1940; Dietrich, 1950; Romer, 1928; Solignac, 1924, 1927
Palaeochoeerus. Arambourg, 1933a; Stromer, 1924 (1923), 1926
Palaeochoeerus sp. Darteville, 1935
palaeogracilis, *Mungos*. Dietrich, 1941, 1942a
palaeojavanicus, *Meganthropus*. Ashton & Zuckerman, 1950b
Palaeoloxodon. Osborn, 1934a
Palaeoloxodon sp. Cooke & Wells, 1946
Palaeomastodon. Andrews, 1902c, 1904a, 1905, 1907b, 1908a; Depéret, 1907, 1908 (1907); Gregory, 1920; Matsumoto, 1922, 1923, 1924; Osborn, 1909b, 1923, 1925; Petronievics, 1923; Schlosser, 1903, 1910, 1911; Weber, 1904
Palaeonictis. Schlosser, 1911
palaeoserengensis, *Mungos*. Dietrich, 1941, 1942a
palaeotherioides, *Megalohyrax*. Hahn, 1934; Matsumoto, 1921; Schlosser, 1910, 1911
palaeotherioides, *Titanohyrax*. Hahn, 1934; Matsumoto, 1921, 1926
palaeotherioides. See *palaeotherioides*
Palaeotragus. Fraipont, 1908
palaeotragus, *Ovis*. Doumergue, 1934; Pomel, 1898 (1897)
pallaryi, *Antilope*. Pomel, 1895
pallaryi, *Gazella*. Doumergue, 1927; Joleaud, 1929
paludinosus, *Atilax*. Dreyer & Lyle, 1931; Hopwood, 1931c
Pan. Schepers, 1946; Topinard, 1893
Pan sp. Broom, 1941c
pantanellii, *Hippopotamus*. Joleaud, 1921 (1920); Vaufrey, 1928
panthera, *Felis pardus*. Romer, 1928
Papio. Hopwood, 1947c; Topinard, 1893
Papio sp. Reck & Kohl-Larsen, 1936; Remane, 1925; Stromer, 1920
Paranthropus. Arambourg, 1948b; Broom, 1938b, 1939a, 1939g, 1941d; Broom & Robinson, 1950c; Le Gros Clark, 1947b, 1948a, 1950a; Dart, 1948a, 1949b, 1949g; von Koenigswald, 1939; Senyürek, 1941; Sera, 1948; Shaw, 1940; Straus, 1950; Wells, 1940

- Parapapio*. Mollett, 1947
Parapedetes. Hopwood, 1929b
Parapithecidae. Schlosser, 1911
Parapithecus. Remane, 1921; Wells, 1940; Werth, 1919 (1918)
pardus, *Felis*. Arambourg, 1931c, 1932b, 1938a; Bourguignat, 1870; Campardou, 1917; Doumergue, 1927; Estaunié, 1941; Hopwood, 1928a; Howe & Movius, 1947; Pomel, 1888a, 1888b; Romer, 1928; Zealley, 1916
pardus, *Panthera*. Dietrich, 1939, 1942a; Hopwood, 1939a, 1947a, 1947b
parvus, *Ancodon*. Andrews, 1906
parvus, *Brachyodus*. Schmidt, 1913
parvus, *Cephalophus*. Broom, 1930, 1934
parvus, *Palaeomastodon*. Andrews, 1905, 1906; Matsumoto, 1924; Osborn, 1936
pattisoni, *Vulpes*. Broom, 1948a
Pedetes. Gregory, 1920
Pedetes sp. Hopwood, 1931c
pekinensis, *Sinanthropus*. Schepers, 1946, 1949b
Pelorocerus. Van Hoepen, 1932b
Pelorovis. Leakey, Hopwood & Reck, 1931
Pentalophodon sp. Kent, 1942b
pentlandi, *Hippopotamus*. Falconer, 1865; Joleaud, 1923a
perimensis, *Hemitragus*. Boule, 1910a
petrocchii, *Libycosaurus*. Bonarelli, 1947
phacochoeroides, *Sus*. Joleaud, 1927a, 1933g; Romer, 1928; Thomas, 1884a, 1884c
Phacochoerus. Andrews, 1923c; Arambourg, 1948b; Bourcart, 1933b; Devillers, 1948; Dietrich, 1937a; Gervais, 1859; Gregory, 1920; Kent, 1942a
Phacochoerus sp. Cooke, 1948a, 1949b; Hopwood, 1939a; Reck & Kohl-Larsen, 1936; Zealley, 1916
pharaohensis, *Loxodonta africana*. Deraniyagala, 1948
pharaohensis, *Prechoeropsis*. Deraniyagala, 1948
Phenacotragus. Schwarz, 1937
phiomensis, *Apidium*. Arambourg, 1943c; Osborn, 1908; Schlosser, 1911; Weber, 1927-1928
phiomensis, *Pterodon*. Osborn, 1909a
Phiomia. Andrews, 1907b; Osborn, 1923, 1925
pictus, *Lycaon*. Arambourg, 1932b; Hopwood, 1931c; Joleaud, 1936b; Wells & Cooke, 1942
pigotti, *Paraphiomys*. Andrews, 1914
Pilgrimia sp. Haughton, 1932a
Pithecanthropus. von Koenigswald, 1942; Schepers, 1949b
planifrons, *Archidiskodon*. Arambourg, 1948b; MacInnes, 1942
planifrons, *Elephas*. Arambourg, 1948 (1947), 1949a; Arambourg & Arnould, 1950 (1949); Dalloni, 1940; Doumergue, 1928; Joleaud, 1928a; Kent, 1941b; Romer, 1928
platyconus, *Equus*. Cooke, 1950; Haughton, 1932b; van Hoepen, 1930a
Plesianthropus. Arambourg, 1948b; Broom, 1938b, 1939a, 1939g, 1947a, 1947b, 1947c, 1949a; Broom & Robinson, 1947a, 1949b, 1950a, 1950c, 1950d; Le Gros Clark, 1947b, 1948a; Dart, 1948a, 1949b, 1949c, 1949g; von Koenigswald, 1939; Schepers, 1948, 1949b; Senyürek, 1941; Sera, 1948; Shaw, 1940; Wells, 1940; Wood Jones, 1947
plicatus, *Equus*. Cooke, 1948a, 1949b, 1950
plicatus, *Kolpohippus*. Cooke, 1950; Dreyer & Lyle, 1931; Haughton, 1932b; van Hoepen, 1930a
Pliohyracidae. Matsumoto, 1926
Pliohyrax. Arambourg, 1933a; Hahn, 1934
Pliopithecus. Adloff, 1907
ponderosus, *Hippopotamus*. Cooke, 1949a; Scott, 1907
Pongo. Topinard, 1893
porcarius, *Cynocephalus*. Thomas, 1884c
porcarius, *Papio*. Jones, 1937 (1936)
Potamochoerus. Dale & Tobiansky, 1947; Gregory, 1920; Janensch, 1925
Potamochoerus sp. Hopwood, 1926b
poweri, *Equus*. Cooke, 1939, 1949b, 1950; Cooke & Wells, 1946
praecapensis, *Serengetilagus*. Dietrich, 1941, 1942a
praecursor, *Gazella gazella*. See *precursor*, *Gazella gazella*
precursor, *Gazella gazella*. Dietrich, 1950; Schwarz, 1937
praethomsoni, *Gazella*. Arambourg, 1947a
preeminens, *Antilope*. Pomel, 1895
prima, *Loxodonta*. Dart, 1929a; Osborn, 1934a, 1942
primigenius, *Bos*. Arambourg, 1929a, 1931a, 1931c, 1932b, 1933 (1931), 1935a, 1938a, 1938b; Arambourg, Boule, etc., 1934; Boule, 1900a; Devillers, 1948; Doumergue, 1893 (1892); Duerst, 1900; Ennouchi, 1948a, 1949c, 1949d, 1949e; Gaillard, 1934; Gervais, 1849d, 1850 (1849)a, 1859; Howe & Movius, 1947; Joleaud, 1918b; Marchand, 1932; Maw, 1876; Mercier & Débruge, 1913; Niçaise, 1870a; Petrocchi, 1941b; Romer, 1928; Ruhlmann, 1936; Thomas, 1881, 1884a, 1884d, 1886; Vaufrej, 1940

- primigenius, Bos taurus*. Débruge & Mercier, 1914 (1913); Doumergue, 1913; Thomas, 1879a
- primigenius, Elephas*. Gervais, 1849b, 1859
- priscus, Bos*. Niçaise, 1870a
- priscus, Bubalus*. Broom, 1909a
- priscus, Elephas*. Pomel, 1896a
- problematicus, Hippotragus*. Cooke, 1947b
- probubalis, Alcelaphus*. Boule, 1900a; Bourcart, 1927; Depéret, Passemard & Rochette, 1928; Doumergue, 1910, 1934; Lecoindre, 1926
- probubalis, Boselaphus*. Ficheur & Brives, 1900; Pomel, 1894c
- procanna, Antelope*. Pomel, 1895
- procanna, Oreas*. Campardou, 1917; Joleaud, 1910, 1936-37 (1935)
- procanna, Taurotragus*. Arambourg, 1947a
- procanna, Taurotragus derbyi*. Joleaud, 1936-37 (1935)
- Procavia*. Hahn, 1934
- Procavia* sp. Hopwood, 1931c, 1939a
- Proconsul*. Anonymous, 1947; Arambourg, 1947c; Broom, 1941d; Le Gros Clark, 1948a, 1949; Hopwood, 1948; von Koenigswald, 1939; Leakey, 1943c, 1946, 1948a; MacInnes, 1943; Marston, 1946; Wells, 1940
- Proconsul* sp. Leakey, 1943c
- prognu, Connochaetes*. Boule, 1900a; Ficheur & Brives, 1900; Flamand, 1902 (1901); Joleaud, 1910; Pomel, 1894c
- prognu, Connochaetes taurinus*. Arambourg, 1938a; Ennouchi, 1948a, 1949d, 1949e; Neuville & Ruhlmann, 1941
- Prohylobates*. Fourtau, 1920; Remane, 1924
- proinuus, Macacus*. Pomel, 1897 (1896)a; Romer, 1928
- proinuus, Simia*. Pomel, 1897 (1896)a
- prokelb, Canis familiaris*. Pomel, 1897 (1896)b
- promaza, Capra*. Joleaud, 1933d
- promaza, Ovis*. Flamand, 1902 (1901); Pomel, 1898 (1897)
- prometheus, Australopithecus*. Ashton & Zuckerman, 1950b; Broom, 1950a; Broom & Robinson, 1950d; Dart, 1948a, 1948b, 1948c, 1948d, 1948e, 1948g, 1949a, 1949b, 1949c, 1949d, 1949e, 1949g; Sauter, 1950; Shapiro, 1949
- Propalaeochoerus*. Stromer, 1924 (1923), 1926
- proplanifrons, Archidiskodon*. Arambourg, 1948b; Osborn, 1934a, 1938, 1942
- Propliopithecus*. Remane, 1921, 1924; Sera, 1917; Wells, 1940
- protamphibius, Hippopotamus*. Anthony, 1946, 1948; Arambourg, 1944, 1945 (1944), 1947a, 1948b
- Protocetus*. Stromer, 1910
- Protypotheroides*. Stromer, 1926
- Provampyrus*. Schlosser, 1910
- Ptolemaiidae*. Osborn, 1908
- pulcher, Vulpes*. Broom, 1939a
- pygargus, Damaliscus*. Cooke, 1941a, 1949b; Wells & Cooke, 1942
- pygmaeus, Mastodon angustidens*. Depéret, 1897
- pygmaeus, Megalohyrax*. Matsumoto, 1921, 1926
- pygmaeus, Phiomia*. Osborn, 1936
- pygmaeus, Pongo*. Schepers, 1946
- quagga, Equus*. Bourdelle, 1934; Cooke, 1941a, 1943, 1948, 1949b, 1950; Cooke & Wells, 1946; Dietrich, 1939, 1942a; Dreyer & Lyle, 1931; Haughton, 1932b; Hopwood, 1931c; Shapiro, 1943
- quagga, Equus quagga*. Dreyer & Lyle, 1931; Cooke, 1950
- quagga, Hippotigris*. Hopwood, 1939a; Reck & Kohl-Larsen, 1936
- quenstedti, Heterocephalus*. Dietrich, 1941, 1942a
- radiciformis, Thaleroceros*. Dietrich 1950; Reck, 1933, 1935, 1937
- Rattus*. Hopwood, 1928a
- rattus, Mus*. Thomas, 1884a
- recki, Adenota*. Reck, 1933; Schwarz, 1932, 1937
- recki, Archidiskodon*. Arambourg, 1948b
- recki, Elephas*. Arambourg, 1934b, 1943 (1942), 1947a, 1948b, 1949a; Devillers, 1948; Ennouchi, 1949b; Joleaud, 1928a
- recki, Elephas antiquus*. Arambourg, 1942; Dietrich, 1916, 1925; Hopwood, 1926a; Kent, 1941b, 1942b; Leakey, Hopwood & Reck, 1931; Osborn, 1928; Reck, 1914b, 1922 (1921)
- recki, Loxodonta antiqua*. Osborn, 1928
- recki, Palaeoloxodon*. Osborn, 1942
- recki, Palaeoloxodon antiquus*. Hopwood, 1936a; MacInnes, 1942
- recki, Phenacotragus*. Dietrich, 1950; Kent, 1942b; Schwarz, 1937
- recki, Prototocyon*. Pohle, 1928
- Redunca*. Arambourg, 1948b
- Redunca* sp. Arambourg, 1949a; Arambourg & Arnould, 1950 (1949); Dietrich, 1950; Hopwood, 1931c; Kent, 1942b

- redunca*, *Cervicapra*. Arambourg, 1938a; Romer, 1928
- redunca*, *Redunca*. Dietrich, 1939, 1950; Joleaud, 1936-37 (1935)
- reuningi*, *Archaeotherium*. von Huene, 1925
- Rhinoceros*. Andrews, 1900; Barbin, 1910; Bourcart, 1933b; Doumergue, 1922, 1925; Gaudry, 1879; Gervais, 1859, 1867-69; Graham, 1920; Royer, 1927; Ruhlmann, 1936; Suess, 1932; Thomas, 1884a, 1884c, 1884d; Vaufrej, 1940
- Rhinoceros* sp. Andrews, 1900, 1914; Arambourg, 1948 (1947); Arambourg, Boule, etc., 1934; Doumergue, 1923; Joleaud, 1936c; Joleaud & Menchikoff, 1934; Lecointre, 1926; Pallary & Tommasini, 1892 (1891); Royer, 1927; Ruhlmann, 1936
- robertsi*, *Cryptomys*. Broom, 1937b
- robertsi*, *Procavia*. Broom, 1948a
- robustus*, *Alcelaphus*. Cooke, 1949b
- robustus*, *Aonyx*. Dreyer & Lyle, 1931
- robustus*, *Equus*. Dalloni, 1940; Savornin, 1920
- robustus*, *Hippopotamus*. Joleaud, 1923a
- robustus*, *Hippopotamus amphibius*. Cooke, 1949a; Fraas, 1907a; Haughton, 1922 (1921)
- robustus*, *Paranthropus*. Arambourg, 1947c; Ashton & Zuckerman, 1950b; Broom, 1938b, 1938c, 1939a, 1939c, 1941c, 1941d, 1942a, 1943a, 1943b, 1945b, 1946, 1950a; Gregory & Hellman, 1938, 1939c; Kaelin, 1949a, 1949b; von Koenigswald, 1942; Sauter, 1950; Schepers, 1946, 1949b; Shaw, 1939a; Straus, 1948
- robustus*, *Sterrohippus*. Haughton, 1932b; van Hoepen, 1930a
- roueni*, *Palaeotragus*. Boule, 1910a
- rouvieri*, *Antilope*. Bourguignat, 1870
- rouvieri*, *Musimon*. Bourguignat, 1870
- rouvieri*, *Ursus*. Arambourg, 1927, 1933c; Bourguignat, 1868a, 1869, 1870; Campardou, 1917
- rozeti*, *Macroscelides*. Romer, 1928
- ruficeps*, *Procavia*. Hahn, 1934
- rufifrons*, *Gazella*. Doumergue, 1927; Howe & Movius, 1947; Joleaud, 1918 (1917), 1929; Romer, 1928
- rufina*, *Gazella*. Joleaud, 1929
- rufina*, *Gazella rufifrons*. Doumergue, 1927; Joleaud, 1918 (1917)
- rugulosus*, *Brachyodus*. Schmidt, 1913
- Sagatherium*. Hahn, 1934; Osborn, 1906; Schlosser, 1910
- sahabianus*, *Stegolophodon*. Petrocchi, 1943
- saldensis*, *Alcelaphus*. Boule, 1900a
- saldensis*, *Boselaphus*. Débruge, 1903 (1902), 1910 (1909); Pomel, 1894c
- Samotherium*. Arambourg, 1935 (1934)
- sandwithi*, *Equus*. Cooke, 1949b, 1950; Cooke & Wells, 1946; Haughton, 1932b
- sanguineus*, *Mungos*. Dietrich, 1939; Reck & Kohl-Larsen, 1936
- sansaniensis*, *Strogulognathus*. Stromer, 1924 (1923), 1926
- sapiens*, *Homo*. Broom, 1941c; Broom & Robinson, 1950a; Le Gros Clark, 1950a; Joleaud, 1932 (1931); Schepers, 1946, 1949b
- saw*, *Meriones*. See *shawi*, *Meriones*
- schaeferi*, *Cervus dama*. Joleaud, 1935a
- schlosseri*, *Titanohyrax*. Hahn, 1934; Matsumoto, 1921, 1926
- schweinfurthi*, *Eocetus*. Kellogg, 1936; Stromer, 1908b
- schweinfurthi*, *Mesocetus*. Fraas, 1904a
- scotti*, *Gerontochoerus*. Cooke, 1949a; Leakey, 1943b
- scotti*, *Rhinoceros*. Cooke, 1950; Hopwood, 1926b
- scriptus*, *Tragelaphus*. Dietrich, 1950; Schwarz, 1937
- scrofa*, *Sus*. Arambourg, 1938a, 1938b; Arambourg, Boule, etc., 1934; Boule, 1900a; Bourguignat, 1870; Débruge, 1909 (1908); Doumergue, 1923, 1926b, 1927; Doumergue & Poirier, 1894; Estaunié, 1941; Flamand, 1902 (1901); Gobert & Vaufrej, 1932; Howe & Movius, 1947; Joleaud, 1910, 1918 (1916), 1933g, 1936c; Joleaud & Lombard, 1933, 1934 (1933); Pallary & Tommasini, 1892 (1891); Pomel, 1888a, 1888b, 1894d; Romer, 1928; Ruhlmann, 1936; Vuillemot, 1937
- scropha*, *Sus*. See *scrofa*, *Sus*.
- selenocera*, *Oegoceros*. Joleaud, 1936-37 (1935)
- sellysii*, *Gerbillus*. Doumergue & Poirier, 1894
- selousi*, *Cynictis*. Zealley, 1916
- selousi*, *Tragelaphus*. Zealley, 1916
- semiticus*, *Connochaetes taurinus*. Dietrich, 1950
- semiticus*, *Gorgon taurinus*. Schwarz, 1937
- semiticus*, *Rhynotragus*. Dietrich, 1950; Reck, 1933, 1935
- Semnopithecus*. Joleaud, 1927a
- sensitivus*, *Dorudon*. Kellogg, 1936
- sensitivus*, *Zeuglodon*. Dart, 1923
- Saccostomus*. Hopwood, 1928a
- Saccostomus* sp. Dietrich, 1942a

- serengetensis*, *Notochoerus*. Arambourg, 1943a; Dietrich, **1942a**
- serengetensis*, *Papio*. Dietrich, **1942a**
- serridens*, *Phiomia*. Andrews, 1902c, 1906; Andrews & Beadnell, **1902**; Osborn, 1936; Schlosser, 1903
- serval*, *Felis*. Chubb, 1909 (1908); Doumergue & Poirier, 1894; Romer, 1928
- setifensis*, *Antilope*. Pomel, **1895**
- setifensis*, *Dorcas*. Dalloni, 1940; Joleaud, 1918 (1917); Savornin, 1920
- setifensis*, *Gazella*. Joleaud, 1929; Lavauden, 1926
- shawii*, *Felis*. Broom, 1948a
- shawii*, *Gerbillus*. Doumergue & Poirier, 1894
- shawii*, *Meriones*. Estaunié, 1941
- shawii*, *Pronotochoerus*. Dale, **1948**
- sheppardi*, *Archidiskodon*. Dart, **1927**, 1929a; Osborn, 1928
- sheppardi*, *Palaeoloxodon*. Osborn, 1934a, 1942
- sigmoidalis*, *Kobus*. Arambourg, **1941**, 1947a
- silberbergi*, *Lycyaena*. Broom, **1945a**, **1948a**
- Simopithecus*. Hopwood, 1947c; Remane, 1925
- Simopithecus* sp. Hopwood, 1939a; Kent, 1942b
- simplex*, *Equus*. Cooke, 1950; Haughton, 1932b; van Hoepen, **1930a**
- simplex*, *Equus capensis*. Haughton, 1932b
- simplex*, *Equus kuhni*. Dreyer & Lyle, **1931**
- simplicidens*, *Opsiceros*. Cooke, 1950; Scott, **1907**
- simplicissimus*, *Equus*. Cooke, 1950; Haughton, 1932b; van Hoepen, **1930a**, 1930b
- simpsoni*, *Austrolagomys*. Hopwood, **1929b**
- simus*, *Atelodus*. Arambourg, 1948b, 1949a; Devillers, 1948
- simum*, *Ceratotherium*. Breuning, 1924; Cooke, 1941a, 1950; Dietrich, 1939, 1942b, 1945; Gregory, 1920; Hopwood, 1926b; Howe & Movius, 1947; Kent, 1942b; Reck & Kohl-Larsen, 1936
- simus*, *Diceros*. Hopwood, 1928a
- simus*, *Rhinoceros*. Arambourg, 1931b, 1938a, 1938b, 1948b; Boule, 1900a; Débruge, 1909 (1908); Ennouchi, 1948a, 1948b, 1949b, 1949c; Hilzheimer, 1925; Joleaud, 1910, 1931; Kent, 1941b, 1942a; Kohl-Larsen, 1940; Neuville & Ruhlmann, 1941; Reck, 1914b; Romer, 1928; Stromer, 1922 (1921)
- Sinanthropus*. von Koenigswald, 1942; Schepers, 1949b
- singae*, *Homoioceras*. Bate, **1949**
- sinuosus*, *Kolpochoerus*. Arambourg, 1943a; Cooke, 1949a; van Hoepen & van Hoepen, **1932**; Shaw, 1939b
- sirensis*, *Hippopotamus*. Boule, 1900a; Dalloni, 1940; Doumergue, 1934; Joleaud, 1923a; Pomel, **1890b**, 1896d
- sirensis*, *Hippopotamus amphibius*. Joleaud, 1910
- sitifensis*, *Gazella*. Arambourg, 1949a
- sitifensis*, *Hipparion*. Arambourg, 1948b; Pomel, **1897d**; Savornin, 1920
- sivalensis*, *Bos*. Joleaud, 1933h
- sivalensis*, *Equus*. Joleaud, 1933h; Lydekker, 1887
- sivalensis*, *Hippopotamus*. Joleaud, 1933h
- sivalensis*, *Pentalophodon*. MacInnes, 1942
- Sivapithecus*. Gregory & Hellman, 1939a, 1939c
- Sivatherium* sp. Kent, 1941b
- smith-woodwardi*, *Aprotodon*. Vaufreyc, 1928
- snowi*, *Teleoceras*. Fourtau, **1920**
- sobrina*, *Saghattherium*. Matsumoto, **1926**
- soemmerringii*, *Gazella*. Howe & Movius, 1947
- somaliensis*, *Equus*. Stehlin & Graziosi, 1935
- somaliensis*, *Rhinoceros bicornis*. Hopwood, 1939b
- spekei*, *Tragelaphus*. Dietrich, 1950; Schwarz, 1932, 1937
- spelea*, *Chlorotalpa*. Broom, **1941a**, 1948a
- spelaea*, *Crocota*. Broom, 1939d
- spelaea*, *Felis*. Flamand, 1902 (1901); Pomel, 1897 (1896)b
- spelaea*, *Felis leo*. Depéret, Passemard & Rochette, 1928; Reck & Kohl-Larsen, 1936; Stromer, 1911
- spelaea*, *Hyaena*. Dalloni, 1940; Flamand, 1902 (1901); Howe & Movius, 1947; Pallary, 1887b; Pomel, 1888a, 1888b, 1897 (1896)b; Stromer, 1911
- spelaea*, *Hyaena crocuta*. Arambourg, 1938a, 1938b; Depéret, Passemard & Rochette, 1928; Campardou, 1917; Gaillard, 1934; Joleaud, 1910
- spelaeus*, *Leptailurus*. Broom, **1937d**, 1939d
- spelaea*, *Panthera leo*. Dietrich, 1939
- spelaeus*, *Papio*. Broom, **1936a**, 1940a
- spelaeus*, *Ursus*. Arambourg, 1927, 1932a, 1933c, 1938a; Arambourg, Boule, etc., 1934; Barone, 1944; Joleaud, 1910; Romer, 1928
- spenceri*, *Mastodon*. Fourtau, **1920**
- spiersi*, *Mylomygale*. Broom, **1948a**
- splendens*, *Tachyoryctes*. Dietrich, 1942a
- stenobunus*, *Phacochoerus*. Cooke, 1949a; Pia, **1930**
- stenonis*, *Equus*. Arambourg, 1948b; Dalloni, 1940; Joleaud, 1910; Pomel, 1897d; Romer, 1928; Savornin, 1920; Thomas, 1884a, 1884c, 1884d, 1886; Tournouër, 1897a, 1897b

- steytleri*, *Hipparion*. Haughton, 1932b; van Hoepen, 1930b
- steytleri*, *Stylohipparion*. Cooke, 1949b, 1950; van Hoepen, 1932a; Joleaud, 1933a, 1933b
- stillei*, *Okapia*. Dietrich, 1941, 1942a
- Strepsiceros*. Arambourg, 1935 (1934), 1948b
- Strepsiceros* sp. Arambourg, 1934b; Cooke, 1948a
- strepsiceros*, *Antilope*. Gervais, 1867-1869; Rüttimeyer, 1877, 1878
- strepsiceros*, *Strepsiceros*. Chubb, 1909 (1908); Cooke, 1949b; Dietrich, 1950; Hopwood, 1928a; Mennell & Chubb, 1907
- strepsiceros*, *Tragelaphus*. Dietrich, 1939; Schwarz, 1937
- striata*, *Hyaena*. Arambourg, 1938a; Broom, 1939d; Campardou, 1917; Doumergue, 1923, 1934; Gobert & Vaufrey, 1932; Romer, 1928; Stromer, 1911
- strictidentata*, *Brachyodus moneyi*. Fourtau, 1920
- stromeri*, *Apodecter*. Hopwood, 1929b
- stromeri*, *Dorudon*. Kellogg, 1936
- stromeri*, *Metolbodotes*. Schlosser, 1910, 1911
- stromeri*, *Prozeuglodon*. Kellogg, 1928, 1936
- stromeri*, *Tragelaphus spekei*. Dietrich, 1950; Schwarz, 1932, 1937
- Stylohipparion*. Dietrich, 1939; Joleaud, 1933a
- Stylohipparion* sp. Arambourg, 1949a; Kent, 1942b
- suara*, *Aepyceros*. Dietrich, 1939
- subantiqua*, *Loxodonta*. Osborn, 1934a, 1942
- subantiqua*, *Pilgrimia*. Haughton, 1932a
- subgazella*, *Antilope*. Pomel, 1895
- subgazella*, *Dorcas*. Doumergue, 1907
- subgazella*, *Gazella*. Joleaud, 1918 (1917), 1929; Lavauden, 1926
- subgigas*, *Geniohyus*. Matsumoto, 1926
- subinermis*, *Rhinoceros*. Anderson, 1932; Campardou, 1917; Doumergue, 1934; Ficheur & Brives, 1900; Joleaud, 1910, 1931; Pomel, 1896 (1895)
- subinermis*, *Rhinoceros mercki*. Romer, 1928
- subkevella*, *Antilope*. Barbin, 1910; Pomel, 1895
- subkevella*, *Dorcas*. Joleaud, 1918 (1917)
- subkevella*, *Gazella*. Débruge, 1910 (1909); Joleaud, 1929; Lavauden, 1926
- subplanifrons*, *Archidiskodon*. Arambourg, 1948b; Dart, 1929a; Haughton, 1932a; Osborn, 1928, 1934a, 1938, 1942
- subplanifrons*, *Mammuthus*. Cooke, 1947a, 1949b
- subspelaea*, *Hyaena crocuta*. Doumergue, 1934
- suillus*, *Megalohyrax*. Hahn, 1934; Matsumoto, 1921, 1926
- suillus*, *Mixohyrax*. Hahn, 1934; Schlosser, 1910, 1911
- sulcatus*, *Cyrtodelphis*. Fourtau, 1920; Stromer, 1907b
- surdaster*, *Pedetes*. Dietrich, 1939, 1942a
- Sus*. Joleaud, 1933h; Royer, 1927; Thomas, 1884a
- Sus* sp. Andrews, 1902b; Arambourg & Arnould, 1950 (1949); Dietrich, 1939; Ennouchi, 1948a, 1949e; Stromer, 1907b; Thomas, 1884a
- swinderianus*, *Thryonomys*. Dietrich, 1949 (1948); Hopwood, 1931c
- Syncerus*. Arambourg, 1948b
- syndactylus*, *Hylobates*. Schepers, 1946
- syriacus*, *Heterohyrax*. Hahn, 1934
- syrticus*, *Stegolophodon*. Petrocchi, 1943
- syrticus*, *Stegotetrabelodon*. Petrocchi, 1941a, 1943
- Tachyoryctes* sp. Hopwood, 1931c
- tandyi*, *Prohylobates*. Arambourg, 1943c; Fourtau, 1920; Remane, 1924
- tao*, *Oryx*. Joleaud, 1936b
- Tapinochoerus*. Shaw, 1939b
- Tatera*. Hopwood, 1928a
- Tatera* sp. Chubb, 1908 (1909); Mennell & Chubb, 1907
- taungsensis*, *Crocidura*. Broom, 1948a
- taurinus*, *Connochaetes*. Arambourg, 1938a, 1938b; Chubb, 1909 (1908); Clark, 1942; Cooke, 1949b; Dietrich, 1950; Ennouchi, 1948a, 1949d, 1949e; Hopwood, 1928a; Mennell & Chubb, 1907; Neuville & Ruhlmann, 1941; Wells & Cooke, 1942
- taurinus*, *Gorgon*. Dietrich, 1939; Hopwood, 1936c; Kohl-Larsen, 1940; Schwarz, 1937
- Taurotragus*. Arambourg, 1948b
- Taurotragus* sp. Cooke, 1939, 1948a, 1949b; Hopwood, 1939a; Reck & Kohl-Larsen, 1936
- taurus*, *Bos*. Arambourg, Boule, etc., 1934; Barone, 1944; Clark, 1942; Débruge & Mercier, 1914 (1913); Doumergue, 1913; Ennouchi, 1949e; Gobert & Vaufrey, 1932; Howe & Movius, 1947; Joleaud, 1918 (1916); Romer, 1928; Thomas, 1877, 1879a
- Telanthropus*. Straus, 1950
- tendagurenses*, *Brancatherulum*. Dietrich, 1927; Simpson, 1928
- terblanchei*, *Thos*. Broom, 1948a
- tertiarius*, *Prohyrax*. Hahn, 1934; Stromer, 1924 (1923), 1926

- thomasi*, *Camelus*. Arambourg, 1938a; Dalloni, 1940; Joleaud, 1910; Pallary, 1887b, 1900; Pomel, 1886 (1885)a, 1886 (1885)c, 1888a, 1888b, 1893c
- thomasi*, *Gazella*. Joleaud, 1918 (1917), 1929; Lavauden, 1926; Pomel, 1895
- thomasi*, *Stylohipparion*. Joleaud, 1933b
- thompsoni*, *Gazella*. See *thomsoni*, *Gazella*
- thomsoni*, *Gazella*. Dietrich, 1950; Hopwood, 1936c
- Thos* sp. Dietrich, 1939; Hopwood, 1939a
- Thryonomys*. Clark, 1942
- Thryonomys* sp. Hopwood, 1939a
- tichorhinus*, *Rhinoceros*. Gaudry, 1879; Thomas, 1879b, 1884a, 1884d
- timidus*, *Lepus*. Arambourg, 1932b; Flamand, 1902 (1901)
- tingitanus*, *Lepus aegyptius*. Campardou, 1917
- Titanohyracidae*. Matsumoto, 1926
- Titanohyrax*. Matsumoto, 1921
- tournoueri*, *Adenota*. Joleaud, 1936-37 (1935)
- tournoueri*, *Antilope*. Joleaud, 1936-37 (1935); Pomel, 1895; Thomas, 1884a, 1884c
- tournoueri*, *Cobus*. Romer, 1928
- tournoueri*, *Oreonagor*. Dalloni, 1940; Joleaud, 1910; Savornin, 1920
- tournoueri*, *Taurotragus*. Joleaud, 1936-37 (1935)
- Tragelaphus*. Arambourg, 1935 (1934), 1948b; Grabham, 1920; Hopwood, 1926b; Joleaud, 1933h
- Tragelaphus* sp. Dietrich, 1950; Dreyer & Lyle, 1931; Hopwood, 1928a; Kent, 1942b; Reck & Kohl-Larsen, 1936
- tragelaphus*, *Musimon*. Bourguignat, 1870
- tragelaphus*, *Ovis*. Barone, 1944; Campardou, 1917; Doumergue, 1923, 1926b, 1927, 1935; Doumergue & Poirier, 1894; Flamand, 1902 (1901); Marchand, 1935; Thomas, 1884a, 1884d; Vuillemot, 1937
- Tragoceros*. Roman, 1931
- transvaalensis*, *Archidiskodon*. Dart, 1927, 1929a; Osborn, 1928
- transvaalensis*, *Australopithecus*. Broom, 1936c, 1937b, 1937c, 1938a, 1938b; Gregory & Hellman, 1939a; Sauter, 1950
- transvaalensis*, *Crossarchus*. Broom, 1937d, 1939d
- transvaalensis*, *Loxodonta*. Cooke, 1947a, 1949b
- transvaalensis*, *Machaerodus*. Broom, 1939d
- transvaalensis*, *Metaschizotherium*. Cooke, 1950; George, 1950
- transvaalensis*, *Palaeoloxodon*. Osborn, 1934a, 1942
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